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WATER SUPPLY OUTLOOK FOR OREGON

Prepared by

U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

OREGON STATE UNIVERSITY
and

STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above in cooperation with other Federal. State and private organizations.



TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbis Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters of key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 970, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

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WATER SUPPLY OUTLOOK FOR OREGON

and FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

JANUARY 8, 1971

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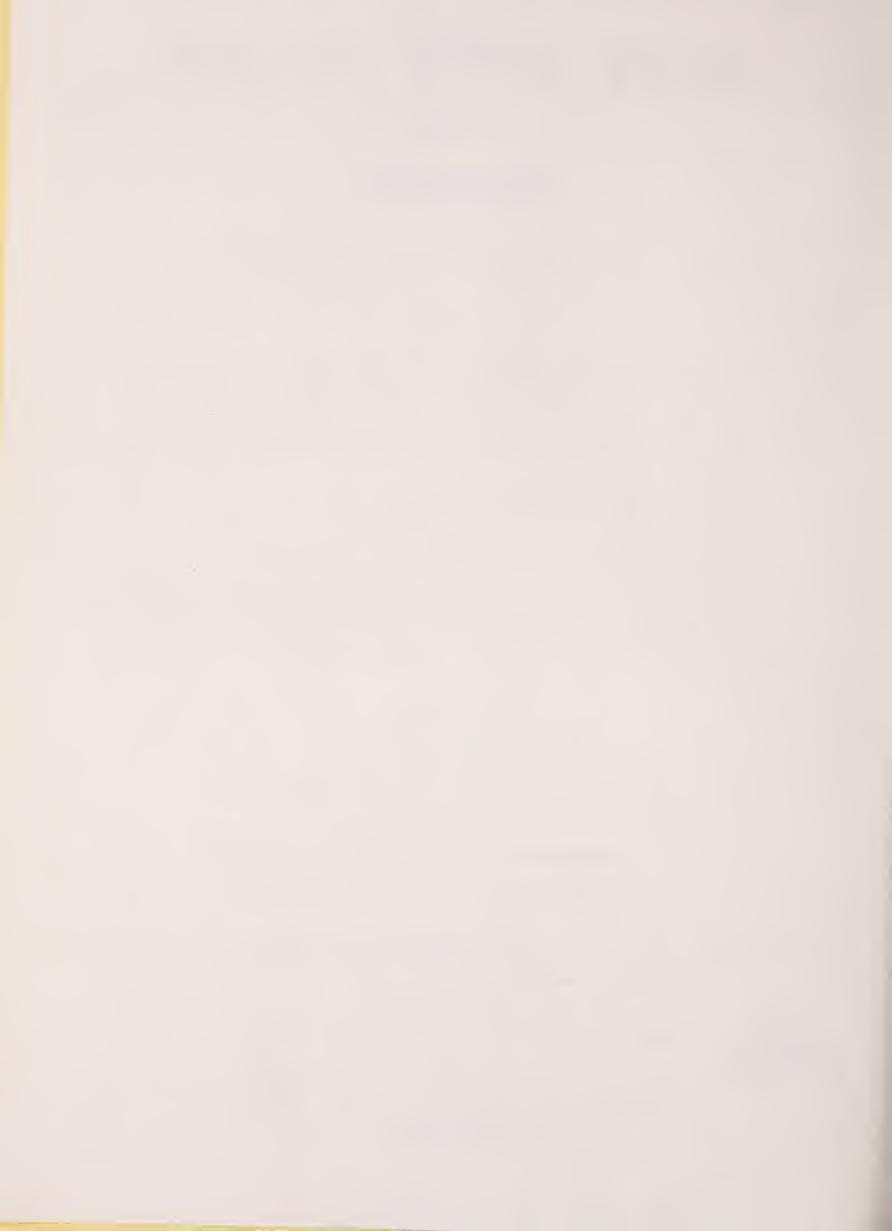
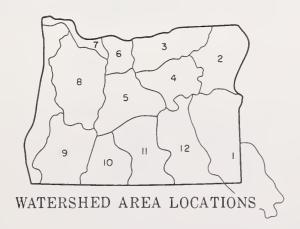
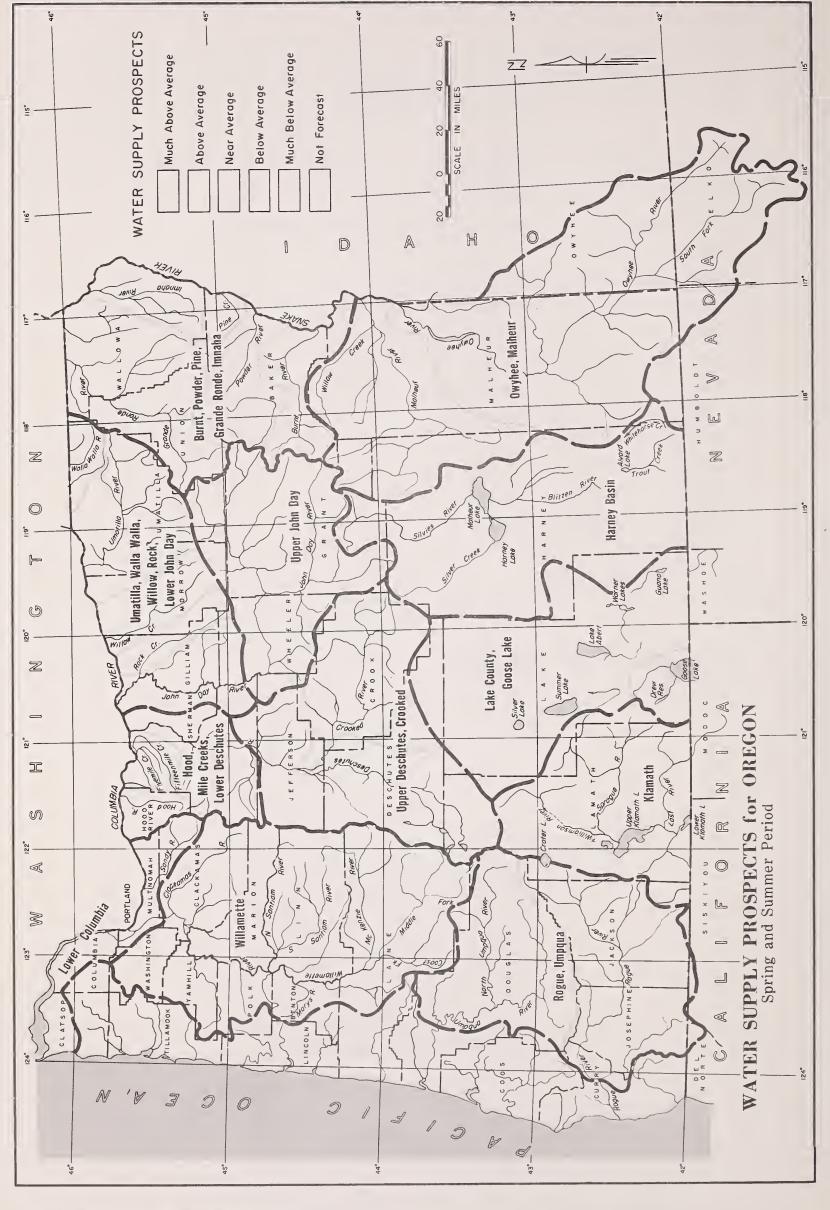


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WATER SUPPLY OUTLOOK for OREGON

JANUARY 1, 1971

Prospects are excellent for good water supplies next summer for most of Oregon's water users. An exceptionally heavy snowpack for January 1 has been measured in the mountains. Reservoir storage is above average and is the best for this time of year since 1965, the flood year. These stored supplies, in combination with the good summer streamflow that should result from the melting snow, will provide adequate water for Oregon in 1971.

SNOW COVER

Below average temperatures and excellent precipitation during October, November, and December, have combined to produce a mountain snow cover ranging from 125 percent to 200 percent of average. The only exception is on the Grande Ronde watershed where the snowpack is 110 percent of average. Snowpacks which are near double the average amounts exist in Malheur, Harney, and Lake Counties. The snow cover in the Oregon Cascades is 150 to 200 percent of average. Many snow courses recorded amounts greater than any year since the early 1950's.

SOIL MOISTURE

Soil moisture is above average. The rains received in October and November brought good soil conditions for runoff to mountain watersheds. With soils wetter than usual more water from the melting snow will be available for runoff.

PRECIPITATION

Fall precipitation was excellent. Rains started early in September and came in generous amounts ranging from near average to 170 percent of average. The rainfall pattern continued strong on into November with all areas of the state recording above average amounts at this time. Rains slacked off some in December to near normal in most of the state. Umatilla County was an exception, receiving only half of the usual December rainfall.

continued--

RESERVOIR STORAGE

Stored water supplies are very good for this time of year. Oregon reservoirs currently contain 26 percent more than usual amounts. This is 15 percent better than last year. These water supplies, in addition to the snowmelt runoff yet to come in the spring, will provide good to excellent supplies to Oregon water users.

STREAMFLOW

Because of the excellent rainfall received this fall and up to January 1 streamflow has been good so far this winter. Most Oregon streams and rivers are currently flowing near normal to above average amounts.

Representative stations are as follows:

	OCT-DEC STREAMFLOW
STREAM	As % of Average
Owyhee Net Inflow	191
Umatilla at Pendleton	79
John Day at Service Creek	103
Deschutes at Moody	91
Grande Ronde at La Grande	106
Willamette, Mid. Fk. nr. Oakridge	102
Umpqua near Elkton	93
Rogue at Raygold	120
Upper Klamath Lake net Inflow	98

^{*} This report contains data furnished by the Oregon State Engineer, U. S. Geological Survey, NOAA National Weather Service, and other cooperators.





WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS

OREGON

as of

JANUARY 1, 1971

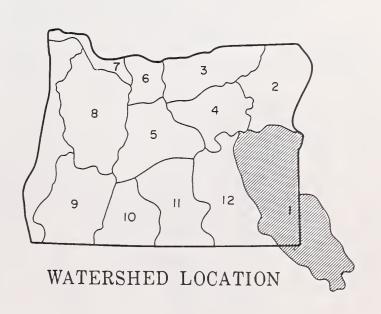
U.S.D.A.SOIL CONSERVATION SERVICE OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

PROSPECTS ARE FOR AN EXCELLENT WATER SUPPLY DURING THE 1971 SEASON. THE MOUNTAIN SNOWPACK IS 200 TO 248 PERCENT OF AVERAGE. DECEMBER PRECIPITATION WAS 134 PERCENT OF AVERAGE AND 137 PERCENT FOR THE SEPTEMBER TO OCTOBER PERIOD. SOIL MOISTURE RANGES FROM 78 PERCENT OF AVERAGE ON THE OWYHEE DRAINAGE TO 109 PERCENT OF AVERAGE ON THE JORDAN CREEK DRAINAGE. THE OWYHEE RESERVOIR NET INFLOW WAS 191 PERCENT OF AVERAGE FOR THE OCTOBER TO DECEMBER PERIOD. RESERVOIR STORAGE WAS MUCH ABOVE AVERAGE ON JANUARY 1.

Expressed as "Poor, Fair, Average, Ex-

	Flow P	eriod
STREAM or AREA	Spring Season	Late Season
Boulder Creek Bully Creek Cow Creek Jordan Creek Jordan Valley Irrig. Dist. McDermitt Creek Oregon Canyon Creek Cwyhee Project Succor Creek Tenmile Creek Vale-Oregon Irrig. Dist. Warmsprings Irrig. Dist. Willow Creek (Reservoired)	Forecasts at the February report which be issued a February 10	ry 1 ch will about



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STREAMFLOW FORECASTS		THIS YEAR			PAST RECORD		
	FORE	CAST	FORECAST	THOUSAND A	CRE FEET		
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Thousand Percent of		Last Year	Average i		
Jordan Creek above Lone Tree Creek Malheur near Drewsey Malheur, North Fork at Beulah Owyhee Reservoir net Inflow ^k	c c c	NOTE:	FORECASTS BI	EGIN ON FEB.	1, 1971.		

FORECAST DATE of LOW FLOW VALUES

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

			MESERVOIR STORAGE C	1100000110	7101 1 117	END OI	HONTH
FORECAST POINT Low Flo			RESERVOIR	Usable	Usable Storage		
FORECAST FOINT	Value Second/Ft.	Recede to Low Flow Flow Value	RESERVOIR	Capacity	This Year	Last Year	Average i
Owyhee near Rome	the rep be	ecasts begin in February 1 ort which will issued about ruary 10, 1971.	Agency Valley Antelope Bully Creek Owyhee Warmsprings	60.0 55.0 30.0 715.0 191.0	21.0 20.5 13.9 582.0 125.9	13.5 3.2 8.0 468.9 71.4	17.4 4.0 330.8 62.0

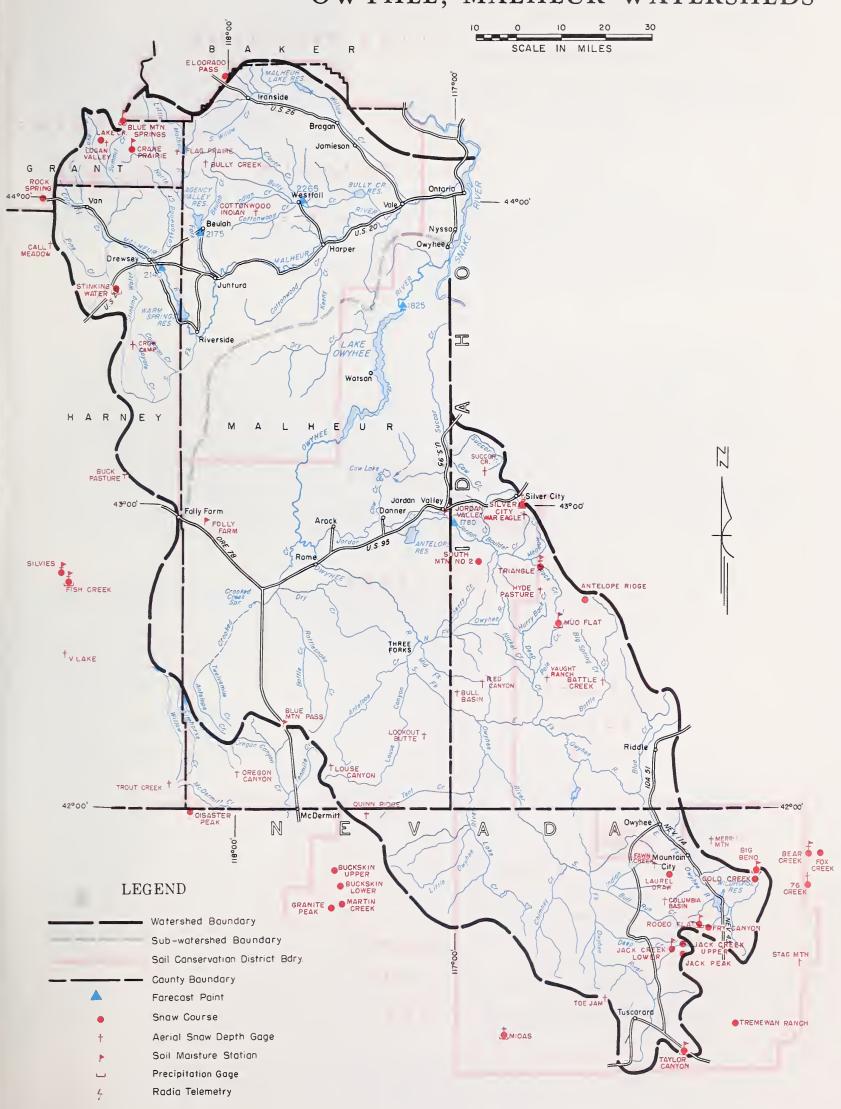
SOIL MOISTURE

SUMMARY of SNOW MEASUREMENTS

OIL MOISTORE				(COMPARISON WITH PREVIOUS	S YEARS)		
RIVER BASIN	Number of	of as PERCENT OF:		RIVER BASIN and/or	Number of Courses	THIS YEAR'S SNOW WATER AS PERCENT OF	
	Stations	Last Year	Average M:	SUB-WATERSHED	Averaged	Last Year	Average i
Jordan Creek	1		109	Jordan Creek	2	222	248
Malheur River	1	161	107	Malheur River	4	173	213
Owyhee River	2	105	78	Owyhee River	3	161	199

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. Data from PP&L Co. or USBR records. (l) Ground measurement. (m) Average for 5 or more years in base period.

OWYHEE, MALHEUR WATERSHEDS







WATER SUPPLY OUTLOOK BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS OREGON

as of JANUARY 1, 1971

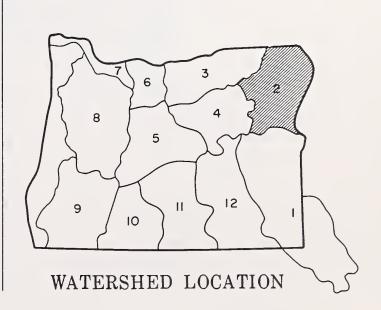
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GENERAL OUTLOOK

AN EXCELLENT WATER SUPPLY IS IN PROSPECT ON THE POWDER AND BURNT RIVER DRAINAGES AND AVERAGE ON THE GRANDE RONDE DRAINAGE. THE MOUNTAIN SNOWPACK WAS 187 AND 162 PERCENT OF AVERAGE ON THE BURNT AND POWDER RIVER DRAINAGES RESPECTIVELY. THE UPPER GRANDE RONDE SNOWPACK IS 107 PERCENT OF THE JANUARY 1 AVERAGE. PRECIPITATION FOR DECEMBER WAS 52 PERCENT OF NORMAL AND 169 PERCENT OF NORMAL FOR THE SEPTEMBER TO OCTOBER PERIOD. SOIL MOISTURE IS AVERAGE. THE GRANDE RONDE AT LaGRANDE FLOWED 106 PERCENT OF AVERAGE DURING THE OCTOBER TO DECEMBER PERIOD. UNITY RESERVOIR AND WALLOWA LAKE WERE HOLDING NEAR AVERAGE AMOUNTS OF WATER ON JANUARY 1. THIEF VALLEY RESERVOIR WAS FILLED TO CAPACITY.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

WAIER SUPPLY UUILUUK cell	ent" With Respect	to Usual Supply.
	Flow F	eriod
STREAM or AREA	Spring Season	Late Season
Alder Slope Baker Valley Big Creek Clover Cr. (nr. N. Powder) Cove Durkee Eagle Valley Elgin Enterprise-Joseph Hereford-Bridgeport Imnaha River La Grande-Island City Lostine-Wallowa No. Powder River-Wolf Cr. Pine Valley Powder River-Elk Creek Summerville Sumpter Valley Union-Hot Lake Unity	the Febru report wh be issued	ich will



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STREAMFLOW FORECASTS		THIS YEAR			PAST RECORD		
	FORE	CAST	FORECAST	THOUSAND ACRE FEET			
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average		
Bear near Wallowa Burnt near Hereford d Catherine near Union Eagle Creek above Skull Creek Grande Ronde at La Grande Hurricane near Joseph Imnaha at Imnaha Lostine near Lostine Powder near Baker Wallowa, East Fork near Joseph	c c c c c c	NOTE :	FORECASTS BEG	IN ON FEB. 1	, 1971.		

SOIL MOISTURE

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RIVER BASIN	Number	THIS YEAR'S MOISTURE as PERCENT OF:		RESERVOIR	Usable	ţ	Jsable Stora	ige
	Stations	Last Year	Average \hat{m}	RESERVOIR	Capacity	This Year	Last Year	Average i
Burnt, Powder Grande Ronde, Catherine Creek, Imnaha River	2	168 99	113 115	Thief Valley Unity Wallowa Lake Phillips Lake	17.4 25.2 37.5 73.5	17.4 8.9 17.9 53.8	13.8 8.0 10.4 26.9	6.5
				SUMMARY of SNOW ME (COMPARISON WITH PREVIOUS RIVER BASIN and/or SUB-WATERSHED Burnt River Grande Ronde River	ASUREM YEARS) Numbe Cours Averag	r of Waged La	THIS YEAR ATER AS PE st Year	C'S SNOW RCENT OF Average i
				above La Grande Powder River Wallowa, Imnaha, Catherine Creek	4 2		.90	107 162

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS







WATER SUPPLY OUTLOOK UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS OREGON

as of

JANUARY 1, 1971

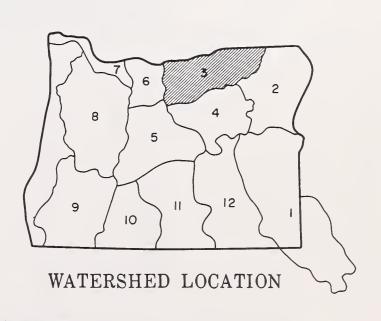
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GENERAL OUTLOOK

WATER SUPPLY PROSPECTS ARE ABOVE AVERAGE FOR THE AREA. THE SNOWPACK ON THE WATERSHED RANGED FROM 125 TO 138 PERCENT OF AVERAGE. THE PRECIPITATION FOR DECEMBER WAS 52 PERCENT OF AVERAGE AND 124 PERCENT OF AVERAGE FOR THE SEPTEMBER TO OCTOBER PERIOD. SOIL MOISTURE IS NEAR AVERAGE FOR JANUARY 1. THE FLOW OF THE UMATILLA ABOVE PENDLETON WAS 79 PERCENT OF AVERAGE FOR THE OCTOBER TO DECEMBER PERIOD. STORAGE IS ABOVE THE JANUARY 1 AVERAGE FOR BOTH COLD SPRINGS AND MCKAY RESERVOIRS.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

	Flow P	eriod
STREAM or AREA	Spring Season	Late Season
Walla Walla River, No. Fk. Walla Walla River, So. Fk. Walla Walla River, Main Walla Walla River, Little Couse Creek Dry Creek Pine Creek Umatilla River, Main Wildhorse Creek Umatilla R. (Cold Springs Reservoir) Umatilla River (McKay Res.) McKay Creek Birch Creek Butter Creek Willow Creek Rhea Creek Rock Creek (John Day tributary)	Forecasts the February report whith be issued February	ary 1 ich will about
		Report prepa



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STREAMFLOW FORECASTS		THIS YEA	R	PAST	RECORD	
	FOR	FORECAST		THOUSAND ACRE FEET		
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	FORÊCAST PERIOD	Last Year	Average i	
Butter Creek near Pine City	С					
McKay near Pilot Rock	С					
Umatilla near Gibbon	С	NOTE.	I CODECTATA DECI	M OM FED 1	1071	
Umatilla at Pendleton	·c	NOIE: I	FORECASTS BEGI	N ON FED. I,	19/1.	
Walla Walla, North Fork near Milton	c c					
Walla Walla, South Fork near Milton	c					

FORECAST DATE of LOW FLOW VALUES

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

Umatilla at Pendleton Forecasts begin in Cold Springs 50.0 25.8 12.3 2			KESEKANIK SINKARE (I	nousand	AC. FL.	END OF	MONTH
Umatilla at Pendleton Forecasts begin in the February 1 report which will be issued about Capacity This Year Av	FORECAST POINT	Value Stream Will Average Date	RESERVOIR	Usable	U	sable Stora	ge
the February 1 McKay 73.8 22.1 28.3 1 report which will be issued about		Second/Ft. Flow Value Value		Capacity	This Year	Last Year	Average i
	Umatilla at Pendleton	the February 1 report which will be issued about		8			20.2

SOIL MOISTURE

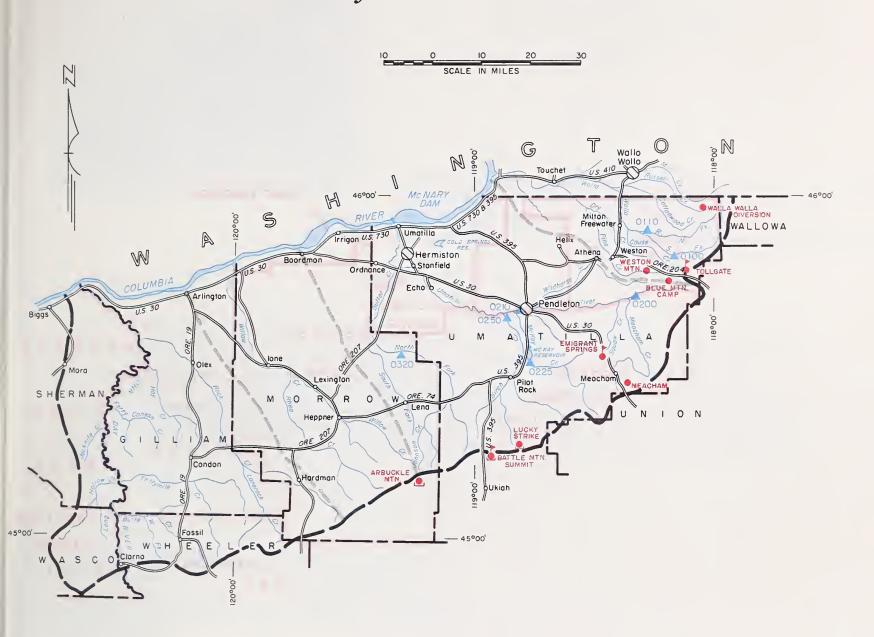
SUMMARY of SNOW MEASUREMENTS

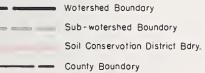
(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN	Number	Number THIS YEAR'S MOISTURE of as PERCENT OF:		RIVER BASIN	Number of Courses	THIS YEA	AR'S SNOW PERCENT OF
211 3/10111	Stations	Last Year	Average m	and/or Courses SUB-WATERSHED Averaged		Last Year	Average i
Umatilla, Walla Walla, McKay Creek	3	101	101	McKay Creek Umatilla River Walla Walla River	3 3 2	286 151 131	136 125 138

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS



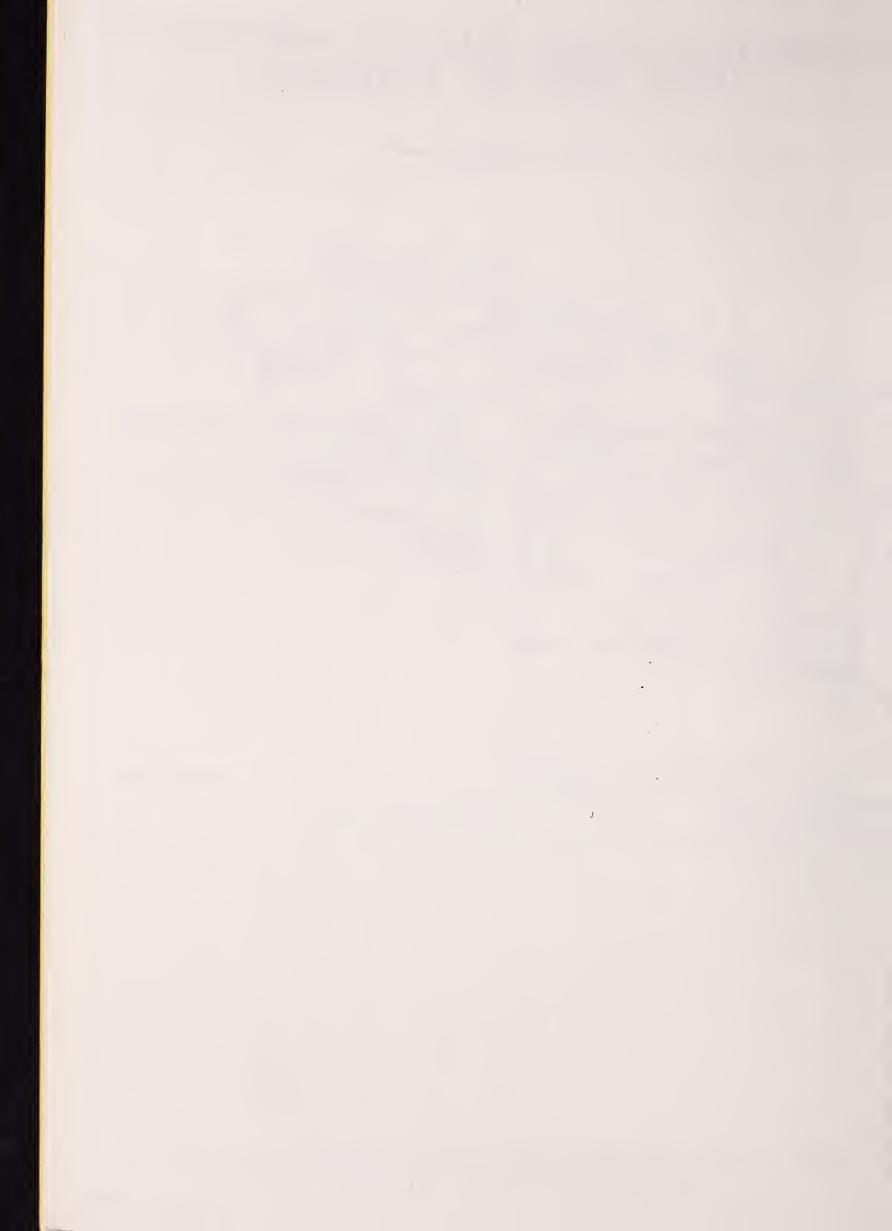


Forecost Point

Snow Course

LEGEND

Soil Moisture Station
Precipitation Gage





WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS OREGON

as of January 1, 1971

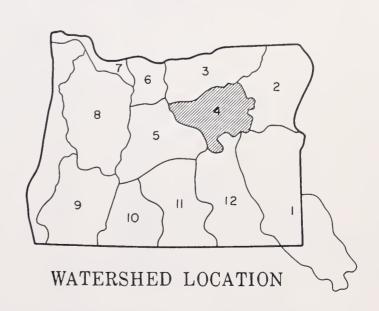
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GENERAL OUTLOOK

EXCELLENT WATER SUPPLIES ARE AGAIN IN PROSPECT FOR THE JOHN DAY BASIN DURING THE 1971 SEASON. THE MOUNTAIN SNOWPACK IS 167 PERCENT OF AVERAGE ON THE NORTH FORK OF THE JOHN DAY AND 179 PERCENT OF AVERAGE ON THE JOHN DAY ABOVE DAYVILLE. PRECIPITATION DURING DECEMBER WAS 84 PERCENT OF AVERAGE AND 164 PERCENT OF AVERAGE FOR THE SEPTEMBER TO OCTOBER PERIOD. WATERSHED SOILS ARE HOLDING SLIGHTLY ABOVE AVERAGE AMOUNTS OF WATER. THE FLOW OF THE JOHN DAY AT SERVICE CREEK WAS 103 PERCENT OF AVERAGE FOR THE OCTOBER TO DECEMBER PERIOD.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

	Flow P	eriod
STREAM or AREA	Spring Season	Late Season
Beech Creek Beech Creek-Fox-Long Cr. Bridge-Mountain Creeks Camas Creek Cherry Creek Indian-Pine Creeks John Day River, Main Fork John Day River, Mid. Fork John Day River, N. Fork John Day River, S. Fork Monument-Kimberly Strawberry Creek	Forecasts the Februar report whi be issued February	ary 1 ich will about



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STREAMFLOW FORECASTS		THIS YEAR			RECORD
	FORE	CAST	FORECAST	THOUSAND A	CRE FEET
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average i
John Day at Prairie City John Day, Middle Fork at Ritter Strawberry near Prairie City	с		ASTS BEGIN ON	FEB. 1, 1971	
		-			

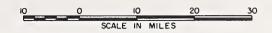
SOIL MOISTURE

SUMMARY OF SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN	Number of	THIS YEAR'	S MOISTURE CENT OF:	RIVER BASIN and/or	Number of Courses Averaged		AR'S SNOW PERCENT OF
	Stations	Last Year	Average m	SUB-WATERSHED	Averaged	Last Year	Average i
John Day above Dayville John Day, North Fork	4	119 102	105 110	John Day, North Fork John Day abv. Dayville	3 3	172 169	167 179

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER JOHN DAY WATERSHEDS





LEGEND Wotershed Boundory Sub-wotershed Boundory Soil Conservation District Bdry. County Boundory Forecast Point Snow Course Soil Moisture Station † Aerial Snow Depth Gage Precipitation Gage





WATER SUPPLY OUTLOOK UPPER DESCHUTES, CROOKED WATERSHEDS

OREGON

as of JANUARY 1, 1971

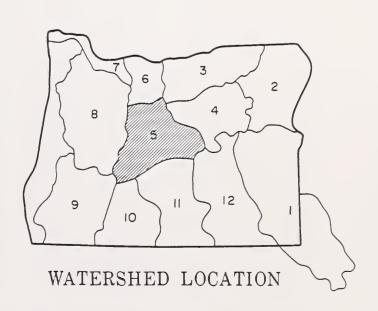
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GENERAL OUTLOOK

WATER SUPPLIES IN THE CROOKED WATERSHEDS WILL BE EXCELLENT DURING THE 1971 SEASON. THE DESCHUTES RIVER DRAINAGES WILL HAVE AVERAGE TO SLIGHTLY BELOW AVERAGE WATER SUPPLIES. THE SNOWPACK RANGES FROM 161 PERCENT OF AVERAGE ON THE LITTLE DESCHUTES TO 254 PERCENT OF AVERAGE ON THE CROOKED AND OCHOCO DRAINAGES. PRECIPITATION DURING DECEMBER WAS 103 PERCENT OF AVERAGE AND 232 PERCENT FOR NOVEMBER. WATERSHED SOILS ARE WELL WETTED. THE OCTOBER TO DECEMBER FLOW OF THE DESCHUTES AT MOODY WAS 91 PERCENT OF AVERAGE. RESERVOIRS ON THE OCHOCO, CROOKED DRAINAGES WERE HOLDING 93 PERCENT OF NORMAL. THE UPPER DESCHUTES RESERVOIRS WERE HOLDING 53 PERCENT OF AVERAGE ON JANUARY 1.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

	Flow P	eriod
STREAM or AREA	Spring Season	Late Season
Arnold Irrigation District Bear Creek Beaver Creek Camp Creek Central Ore. Irrig. Dist. Crooked River Deschutes River Hay-Trout Creeks Lone Pine Irrig. Dist. Mill Creek North Unit Irrig. Dist. Ochoco Creek Sisters Irrigation Dist. Snow Creek Irrigation Dist. Squaw Creek Irrig. Dist. Swalley Ditch Tumalo Project Walker Basin Irrig. Dist.	Forecasts the Februare report whit be issued February	ary 1 ich will about



T.A. GEORGE AND H.M. VANCE

U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

- Report prepared by -

STREAMFLOW FORECASTS		THIS YEAR	PAST RECORD			
	FORE	CAST	FORECAST	THOUSAND A	ND ACRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average i	
Crane Prairie Reservoir total Inflow Crescent at Crescent Lake d Crooked near Post Deschutes at Benham Falls d Deschutes below Snow Creek Deschutes, Little near Lapine d Ochoco Reservoir net Inflow Odell near Crescent Squaw near Sisters Tumalo near Bend d	c c c c c c c c c	NOTE:	FORECASTS BI	EGIN ON FEB.	1, 1971.	

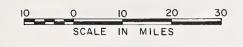
FORECAST DATE of LOW FLOW VALUES

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

FORECAST POINT	Low Flow Stream Will Average Date of Low Flow		RESERVOIR	Usable		Jsable Stora	age
TORECAST FORM	Second/Ft.	Recede to Low Flow Value Value	NESEKVO/IK	Capacity	This Year	Last Year	Average i
Deschutes at Bend Little Deschutes near La Pine Crane Prairie net Inflow	the repo be i	casts begin in February 1 rt which will ssued about uary 10, 1971.	Crane Prairie Crescent Lake Ochoco Prineville Wickiup	55.3 86.9 47.5 153.0 200.0	37.9 34.8 23.5 91.0 94.2	32.4 32.2 17.9 97.8 111.3	44.3
			SUMMARY OF SNOW ME (COMPARISON WITH PREVIOUS RIVER BASIN and/or SUB-WATERSHED		r of W	THIS YEAR ATER AS PE	
			Crooked, Ochoco Deschutes abv. Wicki Little Deschutes Tumalo & Squaw Crs.	1 up 1 2 2		471 233 230 254	254 184 161 189

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER DESCHUTES, CROOKED WATERSHEDS









WATER SUPPLY OUTLOOK HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

OREGON

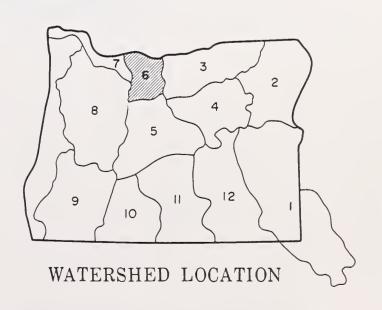
*as of*JANUARY 1, 1971

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

ABOVE AVERAGE WATER SUPPLIES ARE IN PROSPECT FOR THE 1971 SEASON FOR THIS AREA. THE SNOWPACK ON MT. HOOD RANGES FROM 140 PERCENT ON THE WHITE RIVER DRAINAGES TO 150 PERCENT OF AVERAGE ON THE HOOD RIVER DRAINAGES. PRECIPITAION WAS 130 AND 90 PERCENT OF AVERAGE FOR NOVEMBER AND DECEMBER RESPECTIVELY. SOIL MOISTURE IS NEAR AVERAGE.

	Flow Pe	eriod
STREAM or AREA	Spring Season	Late Season
Aldridge Ditch (Tony Creek) Badger Creek Dee Irrigation District East Fork Irrig. Dist. Farmers Irrigation Dist. Hood River Irrigation Dist. Juniper Flat Middle Fork Irrig. Dist. Mile Creeks Mill Creek Mount Hood Irrig. Dist. Rock-Gate-Threemile Creeks Tygh Creek White River	Forecasts the Febru report wh be issued February	ary 1 ich will about



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STREAMFLOW FORECASTS		THIS YEA	R	PAST RECOR			
	FORE	FORECAST		THOUSAND ACRE FEET			
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	FORECAST PERIOD	Last Year	Average i		
Hood River near Hood River d Hood, West Fork near Dee White below Tygh Valley	c c c	NOTE: I	FORECASTS BEGI	N ON FEBRUAR'	Y 1, 1971.		

FORECAST DATE of LOW FLOW VALUES

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

	Low Flow Stream Will of Low Flow RESERVOIL			Usable	Usable Storage		ge	
FORECAST POINT	Value Second/Ft.	Recede to Low Flow Value		RESERVOIR	Capacity	This Year	Last Year	Average i
Clear Branch Inflow	the F repor be is	easts begine asts begine the control of the control	ill	Clear Lake (Wasco) *Reading 12/22/70.	11.9	4.2*		

SOIL MOISTURE

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN	Number of	as PERCE	YEAR'S MOISTURE RIVER BASIN and/or		Number of Courses	THIS YE WATER AS	AR'S SNOW PERCENT OF
	Stations	Last Year	Average m	SUB-WATERSHED	Averaged	Last Year	Average i
Hood River, Mile Creeks	1	100		Hood River Mile Creeks White River	4 - 3	170 157	154 140

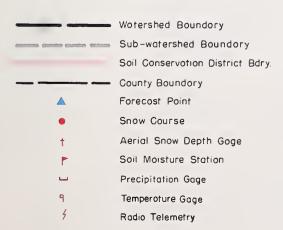
⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS





LEGEND







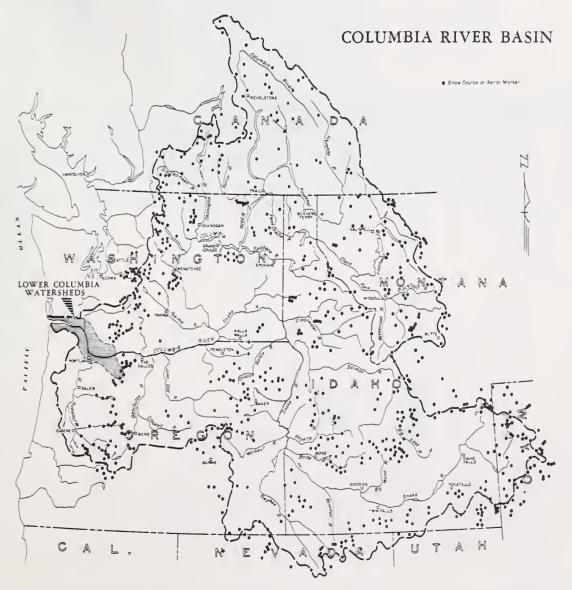
WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

as of JANUARY 1, 1971

U. S. D. A. SOIL CONSERVATION SERVICE OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

AMPLE WATER SUPPLIES ARE FORECAST FOR THE COLUMBIA RIVER BASIN. THE SNOWPACK IS EXCELLENT AND IN GENERAL EQUALS THE FEBRUARY 1 AVERAGE AND IN SOME AREAS OF OREGON, SOUTHERN IDAHO, AND WASHINGTON EQUALS THE MARCH 1 AVERAGE. SOIL MOISTURE IS AVERAGE OR ABOVE EXCEPT IN THE UPPER BASIN IN CANADA WHERE IT IS CONSIDERABLY BELOW. RIVER STAGES ALONG THE LOWER COLUMBIA SHOULD BE ABOVE NORMAL DURING LATE SPRING AND EARLY SUMMER.



T.A. GEORGE AND M. M. VANCE

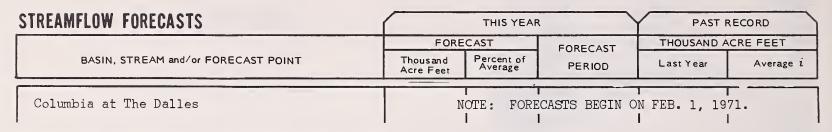
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1218 S.W. WASHINGTON ST.
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SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF		
SUB-WATERSHED		Last Year	Average i	
Sandy River	2	157	135	



HISTORICAL DATA (Columbia River at The Dalles)

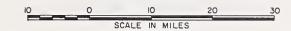
	S	TREAMFLOW (1,000 A.F.)	PEAK			
YEAR	APR.— SEPT.	APR JUNE	MAY - JUNE	(1,000 c.f.s)	DATE	
1953	100,600	64,900	55,800	609	June 17	
1954	119,500	70,500	59,300	561	May '23	
1955	99,500	58,300	50,300	545	June 26	
1956	131,400	96,900	75,800	815	June 3	
1957	105,700	80,500	67,200	700	May 22	
1958	97,700	72,000	58,600	593	May 31	
1959	112,500	71,900	58,900	555	June 23	
1960	97,000	64,000	48,000	442	June 6	
1961	101,400	74,400	64,000	699	June 8	
1962	94,600	64,100	49,200	460	June 5	
1963	87,000	56,300	46,200	437	June 18	
1964	109,020	70,739	61,313	662	June 18	
1965	114,137	80,024	62,477	520	June 9	
1966	87,268	58,120	45,922	396	June 12	
1967	107,771	72,903	65,112	622	June 10	
953-67 Avg.	105,181	72,408	59,689	574		

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

		DRAINAGE DISTRICT PUMPHOUSE						
VANCOUVER	FLOW AT	SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
GAGE	THE DALLES	RIVER MILES						
(Weather Bu.)	(1,000 c.f.s)	118.9	96.0	91.0	77. 0	62.0	52.0	47. 0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

LOWER COLUMBIA WATERSHEDS





LEGEND Wotershed Boundory Sub-wotershed Boundory Soil Conservation District Bdry. County Boundory River Miles Snow Course Temperoture Rodio Telemetry





WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

as of

JANUARY 1, 1971

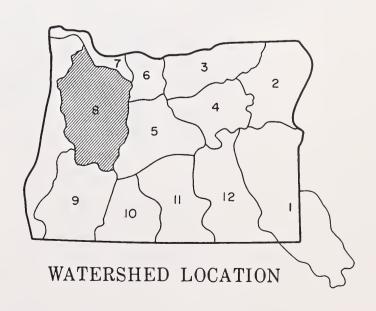
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GENERAL OUTLOOK

EXCELLENT WATER SUPPLIES ARE IN PROSPECT FOR THE WILLAMETTE WATERSHEDS DURING THE 1971 SEASON. THE SNOWPACK RANGES FROM 141 PERCENT OF AVERAGE ON THE McKENZIE RIVER TO 393 PERCENT OF AVERAGE ON THE ROW RIVER DRAINAGE. THIRTY INCHES OF WATER WERE MEASURED AT THE CHAMPION SNOW COURSE SETTING A JANUARY FIRST RECORD SINCE MEASUREMENTS WERE FIRST STARTED ON THIS DATE IN 1950. PRECIPITATION DURING DECEMBER WAS 112 PERCENT OF NORMAL AND 122 PERCENT OF AVERAGE FOR THE SEPTEMBER TO OCTOBER PERIOD. THE MIDDLE FORK OF THE WILLAMETTE RIVER BELOW THE NORTH FORK, FOR THE OCTOBER-DECEMBER PERIOD, FLOWED 102 PERCENT OF NORMAL. MULTIPURPOSE POWER RESERVOIRS ARE BEING HELD AT THEIR USUAL LOW LEVELS FOR THIS TIME OF YEAR.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

	Flow Period				
STREAM or AREA	Spring Season	Late Season			
Calapooya Clackamas McKenzie Molalla Santiam, North Santiam, South Willamette, Coast Fork Willamette, Middle Fork	Forecasts the Februa report whi be issued February 1	ry 1 .ch will .about			



T.A. GEORGE AND H.M. VANCE

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TREAMFLOW FORECASTS		THIS YE	PAST RECORD			
	FORE	CAST	FORECAST	THOUSAND ACRE FEET		
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average		Last Year	Average '	
Clackamas at Big Bottom Clackamas at Estacada Clackamas above Three Lynx McKenzie at McKenzie Bridge ^d McKenzie near Vida ^d Oak Grove Fork above Power Intake Row near Dorena Santiam, North at Mehama ^d Santiam, South at Waterloo ^d Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge Willamette at Salem ^d	c c c c c c	NOTE:	FORECASTS BEGI	N ON FEB. 1,	1971.	

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

DECED VOID	Usable	U	sable Stora	ge	RIVER BASIN and/or	Number of Courses.	THIS YE WATER AS	AR'S SNOW PERCENT OF
RESERVOIR	Capacity	This Year	Last Year	Average i	SUB-WATERSHED	Averaged	Last Year	Average 'i
Blue River Cottage Grove Cougar Detroit Dorena Fall Creek Fern Ridge Foster Green Peter Hills Creek Lookout Point Timothy Lake *Multiple purpose reserved primarily for flood runoff.	85.6* 30.0* 155.2* 299.9* 70.5* 115.0* 94.2* 30.0* 270.0* 200.0* 337.2* 61.7	2.1 2.0 0.0 0.8 4.0 0.0 9.9 2.3 16.3 2.7 7.1 47.0	0.2 8.8 13.1 2.7 0.0 0.1 1.4 10.1 0.0 56.3 41.5		Clackamas River McKenzie River Row River Santiam River Willamette, Mid. Fk.	1 3 2 4 3 3	156 180 296 235 224	192 141 393 203 171

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WILLAMETTE WATERSHEDS







WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS OREGON

*as of*JANUARY 1, 1971

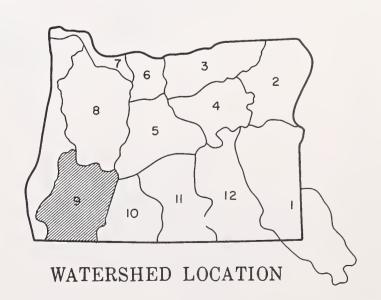
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GENERAL OUTLOOK

PROSPECTS ARE FOR ABOVE AVERAGE TO EXCELLENT WATER SUPPLIES IN THE ROGUE-UMPQUA RIVER BASINS DURING 1971. THE SNOWPACK IS 115 PERCENT TO 160 PERCENT OF NORMAL FOR JANUARY FIRST ON THE ROGUE-UMPQUA DRAINAGES AND 475 PERCENT IN THE SISKIYOUS. THIS IS 200 TO 500 PERCENT OF THE 1970 MEASUREMENTS FOR THE SAME PERIOD. PRECIPITATION DURING DECEMBER WAS 111 PERCENT OF AVERAGE AND 180 PERCENT OF AVERAGE FOR NOVEMBER. THE OCTOBER TO DECEMBER FLOW OF THE ROGUE AT RAYGOLD WAS 120 PERCENT OF AVERAGE AND THE UMPQUA NEAR ELKTON WAS 93 PERCENT OF NORMAL. JANUARY FIRST RESERVOIR STORAGE WAS 122 PERCENT OF AVERAGE.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

Althouse Creek Applegate River, Big Applegate River, Little Ashland Creek Butte Creek, Big Butte Creek, Little Cow Creek Deer Creek Elk Creek Emigrant Creek (abv. Res.) Evans Creek Gold Hill Irrigation Dist. Grants Pass Irrig. Dist. Grave Creek Illinois River, West Fork Jump-off-Joe Creek Neil Creek Rogue River Sucker Creek Table Rock Irrig. Dist. Thompson Creek Wagner Creek Williams Creek Williams Creek	WAIER SUPPLY UUILUUN cell	ent" With Respect	to Usual Supply.
Althouse Creek Applegate River, Big Applegate River, Little Ashland Creek Butte Creek, Big Butte Creek, Little Cow Creek Deer Creek Elk Creek Emigrant Creek (abv. Res.) Evans Creek Gold Hill Irrigation Dist. Grants Pass Irrig. Dist. Grave Creek Illinois River, East Fork Illinois River, West Fork Jump-off-Joe Creek Red Blanket Creek Red Blanket Creek Rogue River Sucker Creek Table Rock Irrig. Dist. Thompson Creek Wagner Creek		Flow F	eriod
Applegate River, Big Applegate River, Little Ashland Creek Butte Creek, Big Butte Creek, Little Cow Creek Deer Creek Elk Creek Elk Creek Emigrant Creek (abv. Res.) Evans Creek Gold Hill Irrigation Dist. Grave Creek Illinois River, East Fork Illinois River, West Fork Jump-off-Joe Creek Red Blanket Creek Rogue River Sucker Creek Table Rock Irrig. Dist. Thompson Creek Wagner Creek	STREAM or AREA		
	Applegate River, Big Applegate River, Little Ashland Creek Butte Creek, Big Butte Creek, Little Cow Creek Deer Creek Elk Creek Emigrant Creek (abv. Res.) Evans Creek Gold Hill Irrigation Dist. Grants Pass Irrig. Dist. Grave Creek Illinois River, East Fork Illinois River, West Fork Jump-off-Joe Creek Neil Creek Red Blanket Creek Rogue River Sucker Creek Table Rock Irrig. Dist. Thompson Creek Wagner Creek	the Febru report when be issued	nary 1 nich will d about



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U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST. PORTLANO, OREGON 9720S

STREAMFLOW FORECASTS		THIS YEA	PAST RECORD		
	FORE	CAST	FORECAST	THOUSAND A	CRE FEET
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average i
Applegate near Copper Clearwater above Trap Creek ^d Fourmile Lake net Inflow ^d Hyatt Reservoir net Inflow ^d Illinois River near Kerby Little Butte, N. Fk. at Fish Lake nr. Lake Cr. Little Butte, S. Fk. near Lake Creek Rogue above Prospect Rogue, South Fork near Prospect ^d Rogue below South Fork Rogue at Raygold near Central Point Rogue at Grants Pass Umpqua, No. blw. Lemolo Res. nr. Toketee Falls ^d	c c c c c c c c c c c	NOTE: F	ORECASTS BEGIN	ON FEB. 1,	1971.

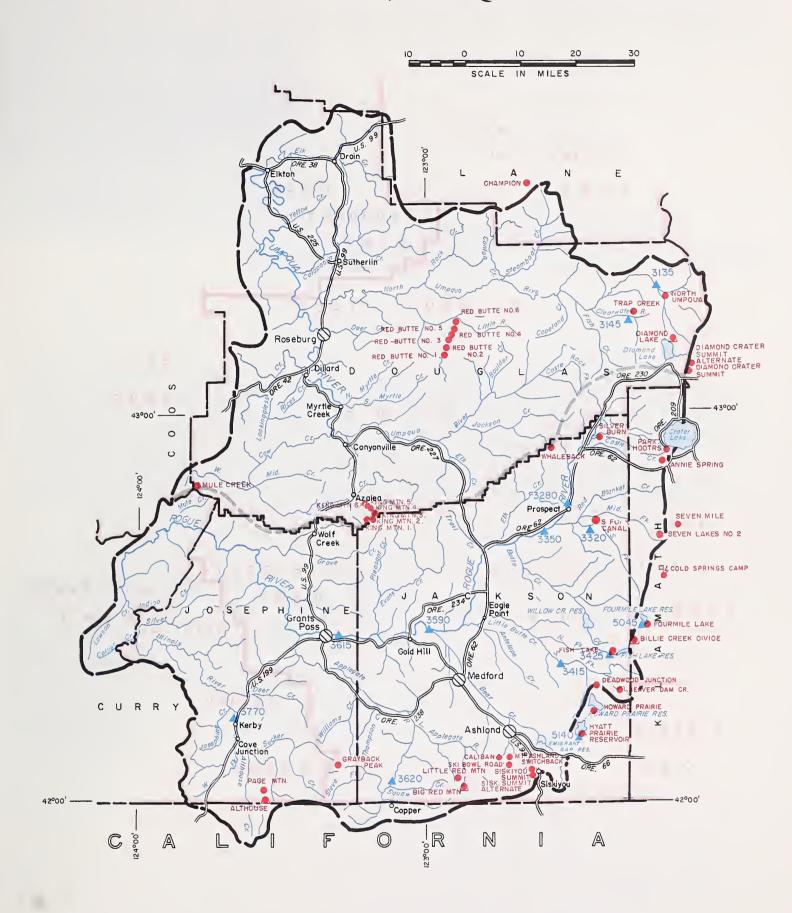
FORECAST DATE of LOW FLOW VALUES

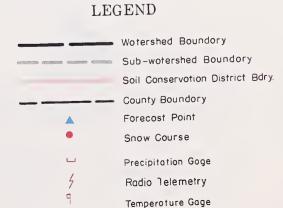
RESERVOIR STORAGE	(Thousand Ac. Ft.)	END OF MONTH
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		Forecast Date		MEDERION STORAGE (nouounu	AL. IL. END OF MONTH			
FORECAST POINT	Low Flow Value Second/Ft. Forecast Date Stream Will Recede to Low Flow Value Value		RESERVOIR	Usable		Usable Stor	age		
				RESERVOIR	Capacity	This Year	Last Year	Average	
Rogue at Raygold Little Butte Creek, South Fork	the F repor be is	asts begin ebruary 1 t which wi sued about ary 10, 19	11	Emigrant Lake Fish Lake Fourmile Lake Howard Prairie Hyatt Prairie *Average for years of record after reconstruction. bReading on 1/6/71	39.0 7.8 16.1 60.0 16.1	17.7 5.0 6.2 46.2 12.6	19.5 5.2 9.0 42.3 11.6	5.2 8.8	
				COMPARISON WITH PREVIOUS RIVER BASIN and/or SUB-WATERSHED Applegate	Numb Cour Aver	er of ses aged L	ast Year	Average	
				Bear Creek Butte Creek Illinois River North Umpqua Rogue River	1 4 - 2 3		518 313 —————————————————————————————————	475 187 —— 115 160	

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

ROGUE, UMPQUA WATERSHEDS









WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

as ofJANUARY 1, 1971

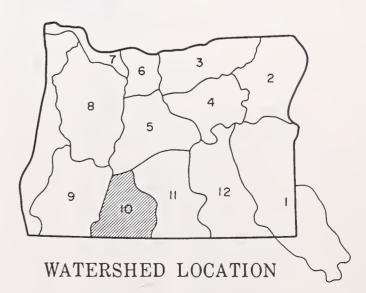
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GENERAL OUTLOOK

THE 1971 WATER SUPPLY OUTLOOK FOR THE KLAMATH BASIN IS EXCELLENT. THE SNOWPACK RANGES FROM 151 PERCENT OF AVERAGE ON THE WILLIAMSON DRAINAGE TO 230 PERCENT ON THE SPRAGUE RIVER DRAINAGE, AND 250 TO 430 PERCENT RESPECTIVELY OF THE JANUARY FIRST READING IN 1970. SOIL MOISTURE IS NEAR AVERAGE. PRECIPITATION DURING DECEMBER WAS 91 PERCENT OF NORMAL AND 213 PERCENT OF NORMAL FOR NOVEMBER. THE NET INFLOW TO KLAMATH LAKE FOR THE OCTOBER TO DECEMBER PERIOD WAS 98 PERCENT OF AVERAGE. RESERVOIR STORAGE IS SLIGHTLY ABOVE AVERAGE.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

	Flow Period				
STREAM or AREA	Spring Season	Late Season			
Ft. Klamath Valley Lost River (Clear Lake) Lost River (Gerber) Lost River (Willow Res.) Sprague River Upper Klamath Lake Williamson River	Forecasts the Februa report which be issued February 1	ry l ch will about			



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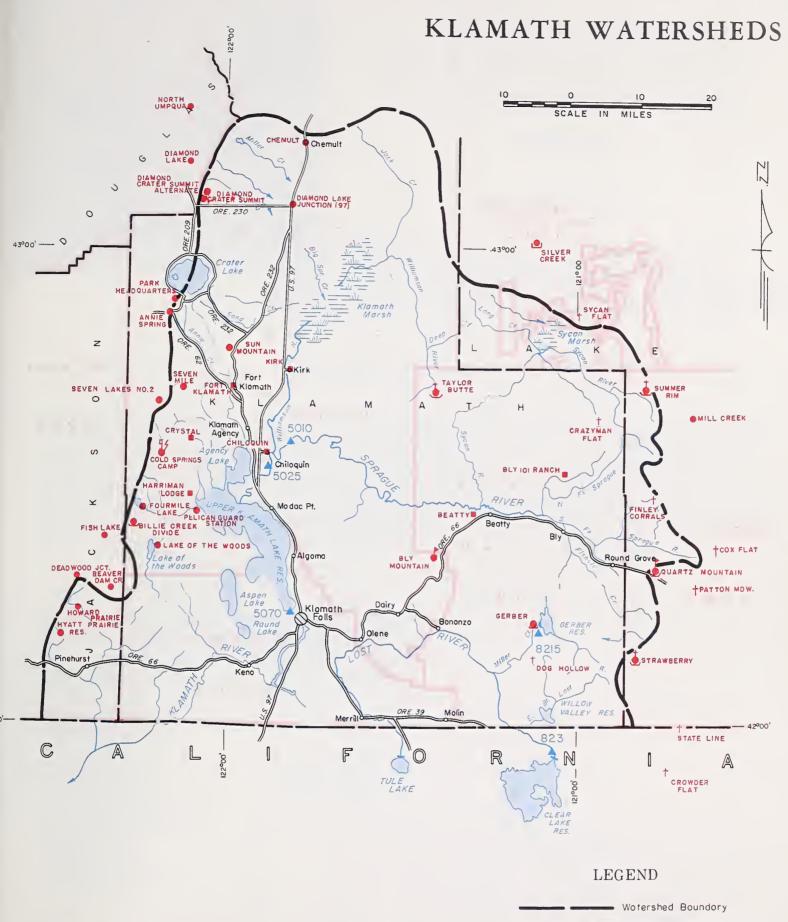
TREAMFLOW FORECASTS		THIS YEAR		PAST RECORD			
BASIN, STREAM and/or FORECAST POINT	FORE Thousand Acre Feet	Percent of Average	FORECAST PERIOD	THOUSAND A	CRE FEET Average		
Clear Lake Reservoir Inflow ^k Gerber Reservoir Inflow ^k Sprague near Chiloguin Upper Klamath Lake net Inflow ^k Williamson below Sprague River	c c c c	NOTE:	FORECASTS E	BEGIN ON FEB.	1, 1971.		
	y						

SOIL MOISTURE

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RIVER BASIN	Number	THIS YEAR'S	MOISTURE ENT OF:	RESERVOIR	Usable	L	Jsable Stora	
	Stations	Last Year	Average m	KESEKVOIK	Capacity	This Year	Last Year	Average i
Upper Klamath	2	109	97	Clear Lake Gerber Upper Klamath Lake	440.2 94.0 584.0	289.5 58.9 330.3	248.9 66.3 364.5	
				SUMMARY OF SNOW ME. (COMPARISON WITH PREVIOUS RIVER BASIN and/or SUB-WATERSHED Lost River	Number Course Average	of WA	THIS YEAR ATER AS PE st Year	Average i
				Sprague River Upper Klamath Williamson River	2 7 3	2	133 173 1754	237 158 151

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.









WATER SUPPLY OUTLOOK LAKE COUNTY, GOOSE LAKE WATERSHEDS **OREGON**

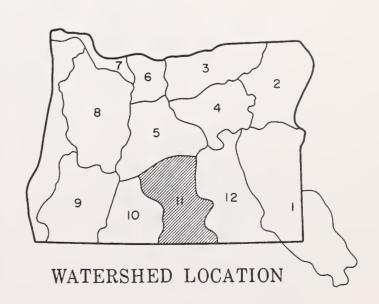
as of JANUARY 1, 1971

U. S. D. A. SOIL CONSERVATION SERVICE OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

EXCELLENT WATER SUPPLIES ARE IN PROSPECT FOR THIS AREA. THE SNOWPACK IS 200 TO 250 PERCENT OF THE AVERAGE AND RANGES FROM 300 TO 400 PER-CENT OF THAT MEASURED ON JANUARY FIRST IN 1970. THE TAYLOR BUTTE SNOW COURSE MEASURED 5.5 INCHES OF WATER. THIS WAS THE HIGHEST JANUARY 1 READING SINCE IT WAS FIRST MEASURED IN 1956. SOIL MOISTURE SUPPLIES ARE NEAR AVERAGE. THE DECEMBER PRECIPITATION WAS 98 PERCENT OF NORMAL BUT WATERSHEDS WERE PRIMED DURING NOVEMBER WHEN PRECIPI-TATION WAS 255 PERCENT OF AVERAGE.

	Flow Period			
STREAM or AREA	Spring Season	Late Season		
Chewaucan Crooked Creek Deep Creek Dry Creek East Side Goose Lake Guano Lake Honey Creek Lakeview Water Users Assn. Rock Creek (Hart Mtn.) Silver-Buck Creeks Summer Lake Thomas Creek Twentymile Creek Warner Lakes	Forecasts the Februar report whit be issued February	ary 1 ich will about		



T.A. GEORGE AND H.M. VANCE

U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST. PORTLANO, OREGON 97205

STREAMFLOW FORECASTS		THIS YEA	R	PAST F	RECORD
BASIN, STREAM and/or FORECAST POINT	FORE Thousand Acre Feet	Percent of Average	FORECAST PERIOD	THOUSAND A	CRE FEET Average i
Chewaucan near Paisley Deep above Adel Drews Reservoir net Inflow d Honey Creek near Plush Silver Creek near Silver Lake Twentymile near Adel	c c c c	NOTE: 1	FORECASTS BEGI	N ON FEB. 1,	1971.

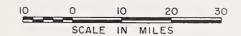
SOIL MOISTURE

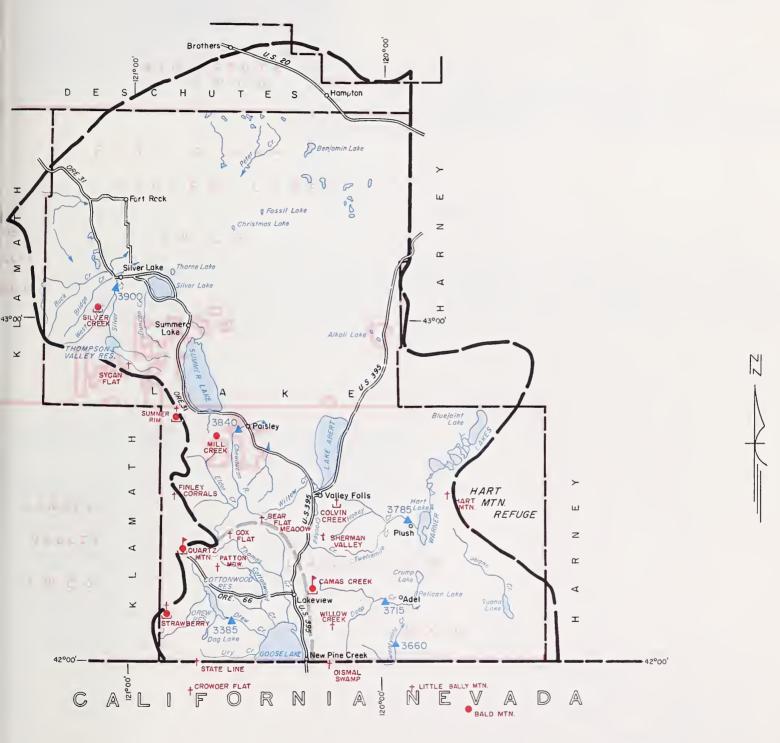
RESERVOIR STORAGE (Thousand	AC.	11.)	END OF MONTH
-----------------------------	-----	------	--------------

OIL MOISTONE				KEZEKANIK ZINKURE (1	iivu5aiiu	AU. FL.) END OF	MONTH
RIVER BASIN	Number of	THIS YEAR'S	MOISTURE	555504010	Usable		Jsable Stor	age
MYEN BASIN	Stations	Last Year	Average m	RESERVOIR	Capacity	This Year	Last Year	Average
Chewaucan, Silver Creek, Drew Creek Honey, Deep, 20-mile Crs.	1	112 112	93 108	Cottonwood Drews Thompson Valley *Average for years of record after reconstruction.	8.7 63.0 19.5	3.0 ^c 41.4 ^d b	2.9 40.1 b	2.1 31.0 11.1
				CReading 12/12/70 dReading 1/5/71				
				SUMMARY OF SNOW ME	YEARS)		THIS YEAR	l strow
				RIVER BASIN and/or SUB-WATERSHED	Numb Cour Aver	ses W	ATER AS PE	RCENT O
				Chewaucan River Deep Creek Drew Creek Honey Creek Silver Creek Twentymile Cfeek	2 1 1 1 2		433 348 326 348 478	236 219 204 215 253

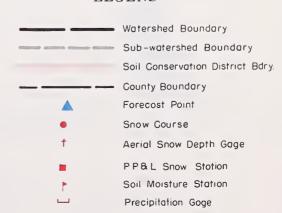
⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

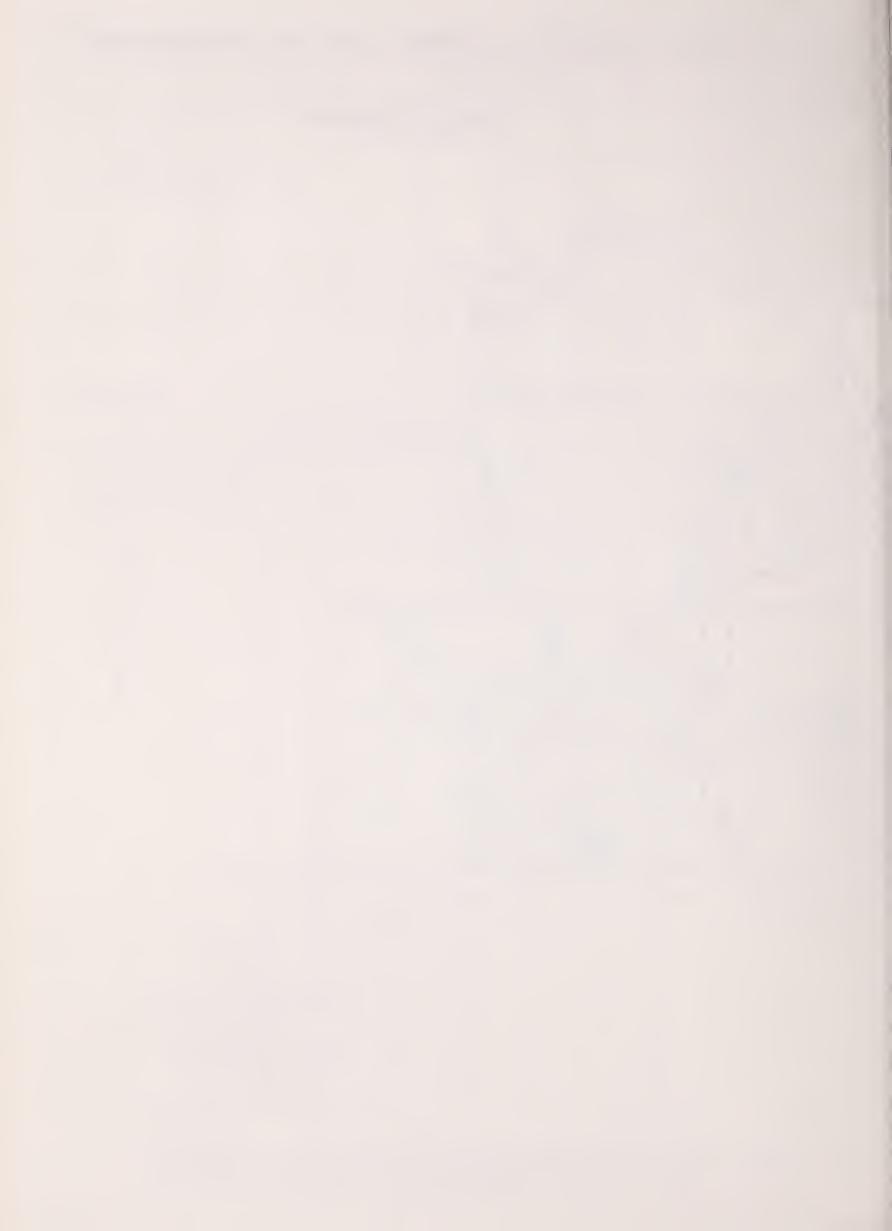
LAKE COUNTY, GOOSE LAKE WATERSHEDS





LEGEND







WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

as of

JANUARY 1, 1971

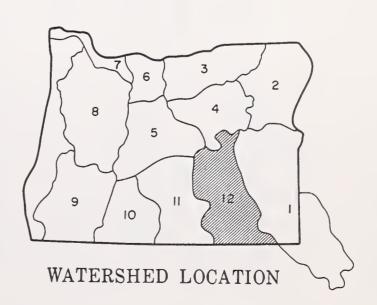
U. S. D. A. SOIL CONSERVATION SERVICE OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

THE EARLY SEASON SNOWPACK IS MUCH ABOVE AVERAGE AND EXCELLENT WATER SUPPLIES ARE IN PROSPECT FOR THIS AREA DURING THE 1971 IRRIGATION SEASON. SOIL MOISTURE IS 127 PERCENT OF AVERAGE. PRECIPITATION IN THE BASIN WAS 215 PERCENT OF AVERAGE DURING NOVEMBER AND 119 PERCENT OF AVERAGE DURING DECEMBER.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

	Flow P	Period
STREAM or AREA	Spring Season	Late Season
Catlow Valley Cow Creek Donner und Blitzen River Mill-Coffeepot Creeks Rattlesnake Creek Silver Creek Silvies River Soldier-Prather Creek Trout Creek Whitehorse Creek	the Febru report when the design	nich will



T.A. GEORGE AND H.M. VANCE

U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

REAMFLOW FORECASTS		THIS YEAR	3	PAST R	ECORD
	FORE	CAST	FORECAST	THOUSAND A	CRE FEET
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average 'i
Donner und Blitzen near Frenchglen	с				
Silver near Riley	С	NOTE.	FORECASTS BE	I CTN ON FFR 1	1971
Silvies River near Burns	С	NOIL.	I CKECHOID DE	I I	1, 13/1.
Frout Creek near Denio	C	-			

SOIL MOISTURE

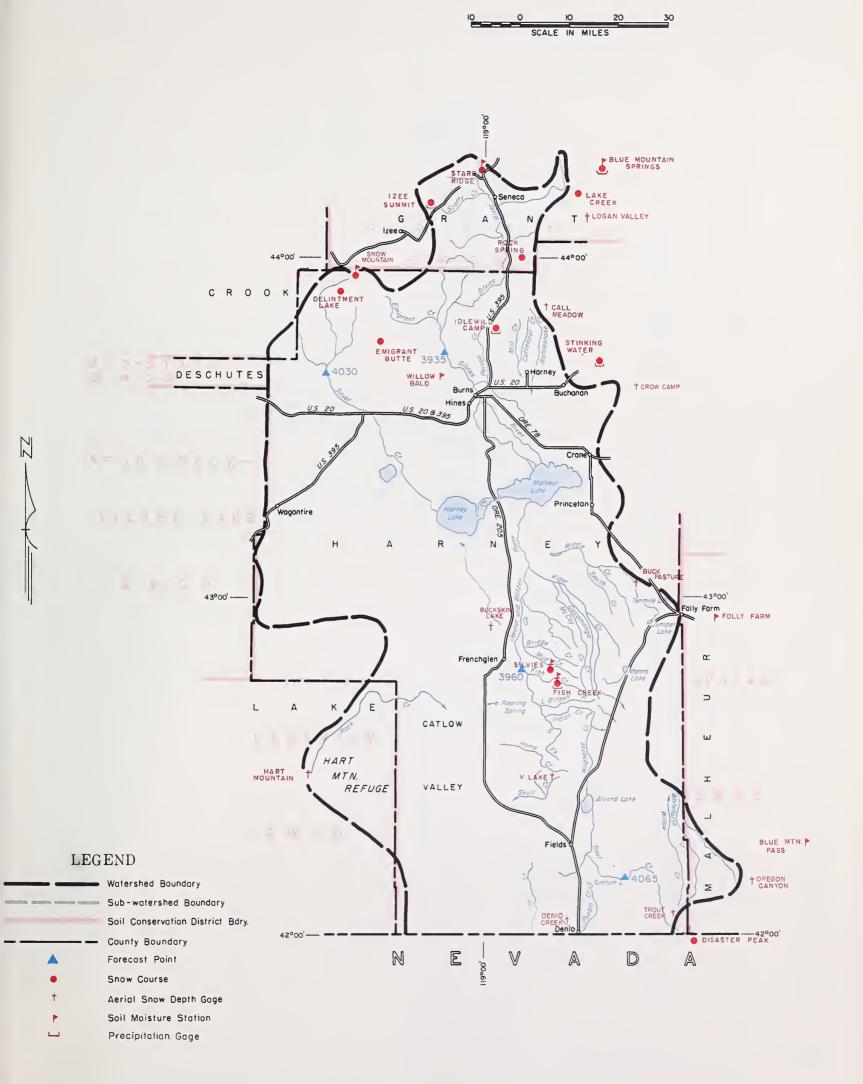
SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN	Number of	THIS YEAR' as PERO	S MOISTURE CENT OF:	RIVER BASIN and/or	Number of Courses		AR'S SNOW PERCENT OF
	Stations	Last Year	Average :m	SUB-WATERSHED	Averaged	Last Year	Average i
Silvies River, Silver Cr.	2	141	127	Donner und Blitzen R. Silver Creek Silvies River Trout Creek	1 - 4 -	364 173 	308 186
				_			

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flom. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

HARNEY BASIN WATERSHEDS





SNOW	TH	HIS YE	AR	PAST	REC.	SNOW	TI	HIS YE	AR	PAST	REC.
DRAINAGE BASIN and/or SNOW COURS	Date of Survey	Snow Depth (In.)	Cont.	(incl	Content hes) Aveit	DRAINAGE BASIN and/or SNOW COURSE		Depth		Water ((incl Last Yr.	
OWYHEE, MALHEU	R WATE	RSHE	DS			BURNI, POWDER, PINE			RONDE	,	
Antelope Ridge (Ida.)	c c					IMNAHA WATE	RSHED:	S 		l	
Battle Creek (Ida.) Bear Creek (Nev.)	6					Aneroid Lake #1 Aneroid Lake #2					
Big Bend (Nev.) Blue Mountain Springs	12/28		3.5				12/30 c	43	11.2	8.5	11.
Blue Mtn. Springs Pillow	12/30		5.3			Beaver Reservoir	1/2	24			3.
Buck Pasture ^e Buckskin, Lower (Nev.)	c					Beaver Reservoir (Alt.) Big Sheep	1/2 c	29	6.2		-
Buckskin, Upper (Nev.)	c					Blue Mountain Summit Bourne	12/30	25	5.6	3.3	2.
Bull Basin (Ida.) Bully Creek	С					County Line	12/31		2.0	1.0	2.
Call Meadow Columbia Basin ^e (Nev.)	c c					Dooley Mountain Eilertson Meadows	12/28		7.3 7.2		3.
Cottonwood-Indian ^e	c					Eldorado Pass	12/30		4.2		1
Crane Prairie Crow Camp e	c					Gold Center Goodrich Lake	1/4	79	24.6	12.8	_
Disaster Peak (Nev.)	С					Intake House	12/29	36	7.3	4.5	-
Eldorado Pass Fawn Creek (Nev.)	12/30 c	21	4.2	3.2	1.2"	Little Alps Little Antone	12/30		7.7 4.6	1	
Fish Creek	С					Lucky Strike	C				
Flag Prairie Fox Creek (Nev.)	c c					Meacham Mirror Lake .	12/29 c	13	2.6		1
Fry Canyon (Nev.) Gold Creek (Nev.)	12/28		3.5 2.0		2.3 ^h 1.6 ^h	Moss Springs Power Plant	c 12/29	23	4.3	6.7 3.8	
Granite Peak (Nev.)	C	12	2.0	1.0	1.0	Schneider Meadows	С				
Hyde Pasture (Ida.) Jack Creek, Lower (Nev.)	c c					Schoolmarm Standley	12/31 c	11	1.4	0.9	1.
Jack Creek, Upper (Nev.)	c c					Taylor Green	c	0.0	-		
Jack Peak (Nev.) Lake Creek R. S.	12/31	32	7.2	3.7	3.6h	Tipton Tipton Snow Pillow	12/30		7.2 8.8		3.
Lake Creek (New Tangent)	c			3.9		Tollgate TV Ridge ^e	12/29	41	10.6	8.2	8.
Laurel Draw (Nev.) Logan Valley [©]	c					IV Klage					
Lookout Butte E Louse Canyon E	c										
Martin Creek (Nev.)	С					UMATILLA, WALLA WALL LOWER JOHN DAY	•			Κ,	
Merritt Mountain (Nev.) Midas (Nev.)	c c					Arbuckle Mountain	c				
Mud Flat (Ida.) Oregon Canyon	c						12/29 12/29		1.7 5.4		
Quinn Ridge (Nev.)	c					Emigrant Springs	12/29			0.5	1
Red Canyon (Ida.) Rock Spring	c 12/28	21	4.0	9. 1	1.6	Lucky Strike Meacham	<i>c</i> 12/29	13	2.6	1.7	2.
Rodeo Flat (Nev.)	12/28			2.5		Tollgate	12/29	41	10.6	8.2	8.
76 Creek (Nev.) Silver City (Ida.)	1/4	39	11.1	4.9	4.9h	Weston Mountain	12/29	2	0.6	0.6	-
Silvies	c				ļ						
South Mountain #2 (Ida.) Stag Mountain * (Nev.)	1/4 c	32	10.0	4.6		UPPER JOHN DAY	ואוע שיביו		og .		
Stinking Water Succor Creek (Ida.)	12/30	19	4.0	1.1	1.3 ^h		12/30	. 1	11.2	8.5	11.
Taylor Canyon (Nev.)	12/28	13	2.6	2.3	1.6 ^h	Arbuckle Mountain	С				
Toe Jam (Nev.) Tremewan Ranch (Nev.)	c 12/28	8	0.9	1.0	0.4h		12/29		1.7		
Triangle (Ida.)	c					Blue Mountain Springs	12/29	47	10.2	5.8	5.
Trout Creek ^e "V" Lake ^e	c					Blue Mtn. Springs Pillow Blue Mountain Summit	12/30		5.3 5.6		2.
Vaught Ranch (Ida.) War Eagle (Ida.)	C					Derr East Fork Canyon ^e	c				
war ragie (ida.)						Gold Center	c				
						Indian Creek Butte ^e Izee Summit	<i>c</i> 12/29	23	4.9	2.6	2.
						Lucky Strike	C				
						Marks Creek Ochoco Meadows	12/28 c	12	3.3	0.7	1.
						Olive Lake Schoolmarm	c 12/31	11	1.4	n o	1.
						(Continued - next page		1 1	1.4	0.3	1.

WILLAMETTE ade Summit ade Summit Alternate	SE of Survey	Depth	Water Cont. (In.)	Water (included)	Ave:
WILLAMETTE ade Summit	Survey	(ln.)	(ln.)	Yr.	Ave:
ade Summit	 WATERS		1		
ade Summit	WATERS		1		
ade Duimitt Atternate	12/30	62	16.6	8.0	10.
pion	12/31	74	30.0	9.7	7
kamas Lake	c				
r Lake	12/22			1	
r Lake (Experimental)	12/22				
Horse Grade oit Town	12/31			1	1
oit Dam	12/30			•	
en Curry Creek	12/31		1		
Pass	12/30			1	
Harriet	1/4	15	6.5	0.0	0
el Mountain g Creek	$\frac{c}{12/31}$	1 0	0.0	0.0	0
Creek Ranch	12/31				1
Park	12/31			1	0
on Forks	12/30		10.8		
s Peak	C				
s Peak (Alternate)	12/30	I C	r r	0.0	0
edie Springs nzie	12/31	3		13.1	
nzie Bridge	12/31			0.0	
dian Dam	12/30			0.0	
City	12/30	0 (0			
idge	12/30	ם (כ	0.0	1	
ine Ridge	b		1	4.3	4
ine Ridge Pillow x Point	<i>b</i> 12/23	ا ه ر	26.7	117 9	90
road Overpass	12/30			1	1
Creek Falls	12/30		i i	3.4	
iam Junction	12/30		15.6		
l Creek	12/22	2 39	9 11.0	6.8	7
l Creek Alternate #2	b		100		١.
thy Lake	1/4	43	13.2	4.8	4
etz Summit	12/31		0.0	0.0	0
o Lake	c c				`
er Creek	12/37	1 5	0.9	0.0	0
e Branch Slide	12/31			3.5	2
ewater Bridge	12/30 c	0 21	6.0	0.9	1
amette Pass amette Pass Pillow	1/1		97 5	12.2	
amerre Lass LITTOM	1/1		2/.3	1 12.2	
	1				
			1		
	1				
			1		
	ł				

SNOW	TH	IIS YE	AR	PAST	REC.	SNOW	TI	HIS YE	AR	PAST	REC
DRAINAGE BASIN and/or SNOW COURSE	Date of Survey	Depth	Cont.		Content hes)	DRAINAGE BASIN and/or SNOW COURSE		Depth		Water ((incl	
DOGUE, VIII DOVI				11.		VC 0.000 VVV	T		V/	Yr.	
ROGUE, UMPQUA	WATER	SHLD I	S I I			KLAMATH WAT	i	ł			
Althouse Annie Spring	12/30	105	29.4	15.6	14.9	Annie Spring Beatty (PP&L)	12/30	105	29.4	15.6	
Beaver Dam Creek	12/30		9.8				12/29	50	11.3	l .	1
Big Red Mountain	C],	Bly Mountain	12/28	22	5.8	1	1
Billie Creek Divide Caliban	12/29	50	11.3	5.6	1 1	(1)1+	12/28	9.6	6.9	0.7	1
Caliban Champion	12/31	74	30.0	9.7	7.7	Chiloquin (PP&L)	12/20	20	0.9	0.6	,
Cold Springs Camp	c					Cold Springs Camp	C				
Cold Springs Camp Pillow	1/1	-	20.7			Cold Springs Camp Pillow	1/1	-	20.7	5.9	-
Deadwood Junction Diamond-Crater Summit	12/30		7.0 17.6	1.5			c c				
Diamond-Crater Sum. Alt.	12/23		16.4	9.0		Crystal (PP&L)	12/30	42	8.2	1.1	3
Diamond Lake	12/23		9.2	5.4	8.2	Diamond-Crater Summit	12/23	60	17.6		
Fish Lake	12/31	41	9.6		5.3,7	Diamond-Crater Sum. Alt.	12/23				
Fourmile Lake	C			9.4	8.7 ^h	Diamond Lake Junction (97) Dog Hollow	12/23 c	20	4.5	1.4	2
Grayback Peak Howard Prairie	12/30	32	7.3	2.1	3.2h		c				
Hyatt Prairie Reservoir	12/30	30	7.2	1.2	3.1 <i>h</i>		12/29	16	3.6	0.6	
King Mountain #1	12/30		14.4			Fourmile Lake	С			9.4	
King Mountain #2 King Mountain #3	12/30		8.8 5.9	2.5	1 1	Gerber Harriman (PP&L)	1/4 12/31	23	1.8 6.5	1.5 e 1.2	
King Mountain #4	12/30		0.0	T. 0		Hyatt Prairie Reservoir	12/30				
King Mountain #5	12/30		0.0	0.0		Kirk (PP&L)	12/30				2
King Mountain #6	12/30	0	0.0	0.0		Lake of the Woods	12/26				
Little Red Mountain Mt. Ashland Switchback	C				1 1	Park Headquarters Pelican Guard Station	12/30	128			
Mule Creek	1/4	31	12.5	2.8		Quartz Mountain	12/30				
North Umpqua	12/28		7.3		,		12/30				9
Page Mountain	С					Seven Lakes #2	С				
Park Headquarters Red Butte #1	12/30		35.8 12.2			Seven Mile State Line (Calif.)	C				
Red Butte #1 Red Butte #2	12/29		9.7			Strawberry	C				
Red Butte #3	12/29						С				
Red Butte #4	12/29		2.5				С				
Red Butte #5	12/29					Sun Mountain Sycan Flat	12/30	56	13.9	5.8	8
Red Butte #6 Seven Lakes #2	12/29 c	٥	0.9	1		Taylor Butte	12/31	24	5.5	0.9	2
Seven Mile	C					laylor batte	2/01	2 1	0.0		"
Silver Burn	12/30				4.4						
Siskiyou Summit	12/30										
Siskiyou Sum. Alt. #2 Ski Bowl Road	12/30 c	42	11.5	2.1		LAKE COUNTY, GOOSE	LAKE I	WATER	RSHEDS	5	
South Fork Canal	12/30	26	6.0	1.7	1.3	Adin Mountain (Calif.)	c				
Trap Creek	1/7	31	8.9	2.1	4.1h	Bald Mountain (Nev.)	C				
Whaleback	С					Bear Flat Meadow Camas Creek	C 191	20	7 9	2.1	9
						Cedar Pass (Calif.)	12/31 c	30	/ • 3	Z = 1	3
						Colvin Creek e	С				
						Cox Flate	c'				
						Crowder Flat (Calif.) Dismal Swamp (Calif.)	C				
						Finley Corrals	C				
						Hart Mountain e	С				
						Little Bally Mtn. (Nev.)	С				
						Mt. Bidwell (Calif.) North Star (Calif.)	c c				
						Patton Meadows	c				
						Quartz Mountain	12/30			1.5	
						Quartz Mountain (Ext.)	12/30	24	4.3	2.0	-
						Sherman Valley ^e Silver Creek	<i>c</i> 12/28	16	3.1	0.9	1
						State Line (Calif.)	c c	10	0.1	0.9	
						Strawberry	С				
						Summer Rim	С				
						Summer Rim Snow Pillow Sycan Flat e	C				
						Willow Creek	c				
						Willow Creek,	С				

SNOW	TH	IIS YE	AR	PAST	REC.	SNOW	TI	HIS YE	AR	PAST	REC.
DRAINAGE BASIN and/or SNOW COURSE	Date of Survey	Snow Depth (In.)	Water Cont (In.)	Water (inc Last Yr.	Content hes)	DRAINAGE BASIN and/or SNOW COURSE	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water C (inch Last Yr.	ontent es)
Blue Mtn. Springs Pillow Buck Pasture e Buckskin Lake e Call Meadows e Crow Camp e Delintment Lake Denio Creek e Disaster Peak (Nev.) Emigrant Butte Fish Creek Hart Mountain e Idlewild Camp	WATER 12/29 12/29 c c c c c c 12/28	SHEDS 47 29	10.2 5.3	5.8	5.6 ^h					Yr.	
Lake Creek R. S. Lake Creek (New Tangent) Oregon Canyon e Rock Spring Silvies Snow Mountain Snow Mountain Pillow	12/29 12/31 6 c 12/28 c c 12/29 12/30 c	32 21 17	4.9 7.2 4.0 3.0 4.0	3.7 3.9 2.1	3.6/ 1.6 2.0/						

SOIL MOISTURE

Name		T	Date of		I Moisture (Inc	,
Bear Creek (Nev.)	Depth	Capacity	Survey	This Year	Last Year	Average
Bear Creek (Nev.)	שוניו כווקט	EBOLEDO				
Big Bend (New.) 6700	HEUR WAT	!	c			
Blue Mountain Springs	48	16.8 16.7	12/28	13.2	11.7	15.4
Crane Prairie	42	16.9	12/30	10.6	6.6	9.1
Jack Creek, Lower (Nev.)	48	18.2	С		14.7f	15.2
Jordan Valley	30	12.5	С			
Mud Flat (Ida.) S500 Rodeo Flat (Nev.) 6800 Taylor Canyon (Nev.) 6200 Triangle (Ida.) S150	48	8.6	C	1.50		
Rodeo Flat (Nev.)	48 48	19.3	1/4	15.9		14.6
Taylor Canyon (Nev.) 6200 Triangle (Ida.) 5150 BURNT, POWDER, PINE, GRA Blue Mountain Summit 5100 Dooley Mountain 5430 Emigrant Springs 3925 Ladd Summit 3730 Moss Springs 5850 Tollgate 5070 UMATILLA, WALLA WALLA, WILLOW Battle Mountain Summit 4340 Emigrant Springs 3925 Tollgate 5070 UPPER JOHN Battle Mountain Summit 4340 Beech Creek 4800 Blue Mountain Summit 5100 Derr 5670 Marks Creek 4540 Snow Mountain Stand 6300 Starr Ridge 5150 Williams Ranch 4500 UPPER DESCHUTES Derr 5670 Marks Creek 5670 Marks Creek 5670 Marks Creek 6300 UPPER DESCHUTES Derr 6670 Marks Creek 6300 UPPER DESCHUTES Derr 6670 Marks Creek 6300 HOOD, MILE CREEKS, LA	40	11.0	12/28	7.4	4.3	10.3
BURNT, POWDER, PINE, GRA Blue Mountain Summit 5100 Dooley Mountain 5430 Emigrant Springs 3925 Ladd Summit 3730 Moss Springs 5850 Tollgate 5070 UMATILLA, WALLA WALLA, WILLOU Battle Mountain Summit 4340 Emigrant Springs 3925 Tollgate 5070 UPPER JOHN Battle Mountain Summit 4340 Beech Creek Blue Mountain Summit 5100 Berr 5670 Marks Creek 4540 Snow Mountain Starmit 6300 Starr Ridge 5150 Williams Ranch 4500 UPPER DESCHUTES Derr 5670 Marks Creek 5670 Marks Creek 5670 Marks Creek 6300 Show Mountain 6300 UPPER DESCHUTES Derr 6670 Marks Creek 6300 HOOD, MILE CREEKS, Lo	48	15.1	12/28	9.7	9.2	13.2
Blue Mountain Summit	48	16.6	С			
Blue Mountain Summit						
Dooley Mountain		1	1	5		
Emigrant Springs	36 36	16.8	12/28	4.2	9.0	9.2 3.7
Ladd Summit	48	22.3	12/29	20.1	21.2	17.2
UMATILLA, WALLA WALLA, WILLOW Battle Mountain Summit 4340 Emigrant Springs 3925 Tollgate UPPER JOHN Battle Mountain Summit 4340 Beech Creek 4800 Blue Mountain Springs 5900 Blue Mountain Summit 5100 Derr 5670 Marks Creek 4540 Snow Mountain 6300 Starr Ridge 5150 Williams Ranch 4500 UPPER DESCHUTES Derr 5670 Marks Creek 5150 Williams Ranch 6300 UPPER DESCHUTES Derr 6670 Marks Creek 6300 HOOD, MILE CREEKS, LG	48	18.9	12/30	10.9	10.1	9.8
UMATILLA, WALLA WALLA, WILLOW Battle Mountain Summit 4340 Emigrant Springs 3925 Tollgate 5070 UPPER JOHN Battle Mountain Summit 4340 Beech Creek Blue Mountain Springs 5900 Blue Mountain Summit 5100 Derr 5670 Marks Creek 4540 Snow Mountain 6300 Starr Ridge 5150 Williams Ranch 4500 UPPER DESCHUTES Derr 5670 Marks Creek 4540 Snow Mountain 6300 UPPER DESCHUTES Derr 6670 Marks Creek 6300 HOOD, MILE CREEKS, LO	36	25.8	c		14.0	
### Battle Mountain Summit	48	23.6	12/29	16.4	14.9	19.7
### Battle Mountain Summit	V. ROCK.	LOWER JOHN	N DAY WATE	RSHEDS		
Emigrant Springs 3925 Tollgate 5070 UPPER JOHN Battle Mountain Summit 4340 Beech Creek 4800 Blue Mountain Springs 5900 Blue Mountain Summit 5100 Derr 5670 Marks Creek 4540 Snow Mountain 6300 Starr Ridge 5150 Williams Ranch 4500 UPPER DESCHUTES Derr 5670 Marks Creek 4540 Snow Mountain 6300 HOOD, MILE CREEKS, LO	48.	13.8	12/29	12.6	12.4	11.5
Tollgate 5070 UPPER JOHN Battle Mountain Summit 4340 Beech Creek 4800 Blue Mountain Springs 5900 Blue Mountain Summit 5100 Derr 5670 Marks Creek 4540 Snow Mountain 6300 Starr Ridge 5150 Williams Ranch 4500 UPPER DESCHUTES Derr 5670 Marks Creek 4540 Snow Mountain 6300 HOOD, MILE CREEKS, LO	48	22.3	12/29	20.1	21.2	17.2
Battle Mountain Summit Beech Creek Blue Mountain Springs Blue Mountain Summit Derr Marks Creek Snow Mountain Starr Ridge Williams Ranch UPPER DESCHUTES Derr Marks Creek Snow Mountain HOOD, MILE CREEKS, LO	48	23.6	12/29	16.4	14.9	19.7
Battle Mountain Summit Beech Creek Blue Mountain Springs Blue Mountain Summit Derr Marks Creek Snow Mountain Starr Ridge Williams Ranch UPPER DESCHUTES Derr Marks Creek Snow Mountain HOOD, MILE CREEKS, LO	DAY MATE	PSHEDS				
Beech Creek 4800 Blue Mountain Springs 5900 Blue Mountain Summit 5100 Derr 5670 Marks Creek 4540 Snow Mountain 6300 Starr Ridge 5150 Williams Ranch 4500 UPPER DESCHUTES Derr 5670 Marks Creek 4540 Snow Mountain 6300 HOOD, MILE CREEKS, LO	48	13.8	12/29	12.6	12.4	11.5
Blue Mountain Springs 5900 Blue Mountain Summit 5100 Derr 5670 Marks Creek 4540 Snow Mountain 6300 Starr Ridge 5150 Williams Ranch 4500 UPPER DESCHUTES Derr 5670 Marks Creek 4540 Snow Mountain 6300 HOOD, MILE CREEKS, LO	48	21.3	12/29	8.7	8.8	10.9
Derr	42	16.9	12/30	10.6	6.6	9.1
Marks Creek 4540 Snow Mountain 6300 Starr Ridge 5150 Williams Ranch 4500 UPPER DESCHUTES Derr 5670 Marks Creek 4540 Snow Mountain 6300 HOOD, MILE CREEKS, LO	36	16.9	С		9.0	9.2
Snow Mountain Starr Ridge Sisso Williams Ranch UPPER DESCHUTES Derr Marks Creek Snow Mountain HOOD, MILE CREEKS, LO	24	9.0	19/99	10.0		
Starr Ridge Williams Ranch UPPER DESCHUTES Derr Marks Creek Snow Mountain HOOD, MILE CREEKS, LO	36 48	14.1	12/28 c	10.9	9.8	10.2
Williams Ranch UPPER DESCHUTES Derr 5670 Marks Creek 4540 Snow Mountain 6300 HOOD, MILE CREEKS, LO	36	10.6	12/29	10.6	7.8	8.8
Derr 5670 Marks Creek 4540 Snow Mountain 6300 HOOD, MILE CREEKS, LO	42	17.9	12/28	17.5	16.6	16.3
Derr 5670 Marks Creek 4540 Snow Mountain 6300 HOOD, MILE CREEKS, LO	apacies-	LIEBERGE				
Marks Creek 4540 Snow Mountain 6300 HOOD, MILE CREEKS, LO			DS c			
Snow Mountain 6300 HOOD, MILE CREEKS, LO	24 36	9.0	12/28	10.9	9.8	10.2
HOOD, MILE CREEKS, LO	48	16.7	c c	10.0	3.0	10.2
Cooper Spur 3490	OWÈR DESC	HUTES WATE	ERSHEDS			
	72	26.4	1/2	14.2	14.2	
·						
	WATERSHE		10/00	3.0	0.5	10
Bly Mountain 5090	42	14.0	12/28	10.4	9.7	10.4

SOIL MOISTURE

DRAINAGE BASIN and/or STATION			e (Inches)	Date of		Moisture (In	
Name	Elevation	Depth	Capacity	Survey	This Year ,	Last Year	Averag
LAKE	COUNTY, GO	OOSE LAKE	WATERSHED	5			
Camas Creek	5720	42	14.5	12/31	12.9	11.5	11.9
uartz Mountain	5320	48	15.3	12/30	8.3	7.4	8.9
			1				
	HARNEY BA	i	1				
Blue Mountain Springs Tish Creek	5900 7900	42 48	16.9 15.0	12/30 c	10.6	6.6	9.1
olly Farm	4450	30	12.5	c			
ilvies	6900	48	16.4	c			
now Mountain Harr Ridge	6300 5150	48 36	16.7 10.6	<i>c</i> 12/29	10.6	7.8	8.8
illow-Bald	5000	24	6.6	12/22	6.5	4.3	4.7
Average for years of recordfor stat	ions with						
as much as 6 years of record or more.							
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PRECIPITATION (Inches)		CURRENT IN	IFORMATION	PAST R	ECORD
DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	Date of Reading	Precip- itation	Last Year	Average +
Anthony Lake (Baker County)	7150	10/5 to			
Camas Creek (Lake County)	5825	12/29 12/1 to	17.80	6.07	
County Line (Umatilla County - Starkey Hqs.)	4800	12/31 11/30 to	5.90	5.95	
Dooley Mountain (Baker County)	5200	12/31 10/5 to	2.60	2.10	
Granite Mountain (Grant County)	5900	12/28 10/5 to	8.50		
Quartz Mountain Summit (Lake County)	5530	12/28 11/30 to	14.80		
Silver Creek (Lake County)	4900	12/30 10/7 to	4.77	6.37	
		12/28	9.19		



П	ujajć li	NAME		LOCATION	CLCV CLCV	NUMBER	NAME		LOCAPIO	PI ELE	EV NUM	19Dt	MME		COCATION SIE 784 8(I	ELEV	NUMBER	NAME	LOCATI	ION ELEV
16 15 15 17 17 17 16	006 0000 00100 0020 0020 0100 0100 0100	OWYHEE, MA Antelope Ridge Battle Croek Bear Creek Blg Band Blue Mtn Pass Buckskin, Love Buckskin, Uppe Bull Booin Columbio Basin Olganter Peak	yhea R)va (Ida) (Ida) (Nov) (Nev) r (Hov) r (Nav) (Ida)	20 88	1E 5700 58E 7800 56E 6700 42E 5290 59E 6700 39E 7200 5W 5600 53E 6650	16H3AP 16G7HP 17G5a 17H5a 16G11a 15H6HP 15H3A 16G1AP 16G1P 15H19a 16F5a 15H9HP 16H7a	Midos Mud Flot Oregon Canyon Quinn Ridgo Red Canyon Rodoo Flet 76 Creek Silver City Silvieo South Mountain R Stag Mountoin Succor Creek Toylor Canyon Too Jam	(Hev) (Ida) (Nev)	9 408 9 47H 32 113 36 43H 6 44H 6 5S 35 32S 10 8S 32 41H 25 5S 35 39H	2W 550 40E 695 41E 630 4W 650 53E 680 58E 710 3W 640 32XE 690 5W 634 58E 780 5W 610 53E 620	00 1852 1851 00 1852 00 1852 00 1863 00 1864 00 1864 00 1864 00 1864	26a .8 .20	Eldorado Paos Flag Prairie Lake Creek Logan Volley Rock Spring S. Fr. Willow Cr. Stinking Water BURNT, POWDER, P RONDE, IMNAHA	INE, GRA WATERSHI	20 14S 38E 4 32 16S 36E 4 10 16S 35'Æ 5 13 16S 35'Æ 5 23 16S 32E 5 2 16S 37E 5 33 21S 34E 4	750 120 100 100 500	18E23 18E30 18E28 17D7P 17D8	Little Alps Little Antons Powor Plant Taylor Green Pine Cir Schneider Meadowa Grande Rond Anoroid Late No. 1 Aneroid Lake No. 2	1 7: 33 7: 3 6: 35 6: 8 River	\$ 37E 5200 \$ 37E 5000 \$ 37E 5000 \$ 39E 3990 \$ 42E \$740 \$ 45E 5400 \$ 45E 7480 \$ 45E 7300
16, 18, 15, 15, 15, 17, 16,	RBa 5 200 A 73 a 73 a 73 a 74 a 75 a 114 75 a 114 75 a 114 75 a 114 75 a 114 75 a 114 75 a	Favn Crook Floh Crook Folh Crook Folly Form Summ For Crook Fry Canyon Gold Croek Granite Pank Hyde Poature Jock Croek, Up Jock Croek, Up Jock Pook Jordan Volley Laurel Draw	(Hev) (Hev) (Hev) (Hev) (Ido) (Ido) (Kev)	2 45H 4 33S 4 8 30S 33 46H 51 45H 22 44H 51 8S 18 42N 51 8S 42H 52 42N 52 8 42H 52 30S 4 8	52E 7000 33E 7900 38E 4450 58E 6800 54F 6700 56F 6600 29 5800 53E 6800 53E 6800 53E 7250 53E 8420	15M3 16G4MA 18G50 18G70 16G120 16G130	Tremowon Rench Triongle Trout Creek "V" Leko Vought Rench Wor Eagle Malhet Blue Mountoin Sp Buck Pooture	(lda) ur Rīvar	25 78 10 41S 31 35'4S 10 11S 20 5S 21 15S 21 29S	3W 770 35E 590 35E 570	00 18E1 00 17E1 00 17E1 00 18E2 18E8 00 18E9 18E9 00 18E5 00 18E5	HOP O	Burni R Eluo Mountain Sum Doolay Mountain Eldorado Pass Gold Center Tipton Powder Anthony Lako Bourne Bourne Bourne	ait Rivar	6 129 36E Si 32 113 40E 5: 20 145 36E 4: 21 95 36E 5: 34 10S 35-E 5: 4 7S 37E 7: 33 8S 37E 7: 32 115 40E 5:	430 500 340 100 125 800 430	18E1P 17D10a 18D9 1808P 1806P 18D5 17D13a 1706H 1807 17D11a 17D7P 1803M 17016a	Anthony Lake Bald Mountain Beaver Roservoir County Line Lucky Strike Hoachem Mirror Lake Moss Spring Schoolmerm Standley Taylor Groen Tollyate TV Ridge No. 2	18 77 14 6 15 4 8 5 28 3 24 5 25 11 34 4 28 3 28 3 28 3 28 4 28 3 28 3 28 4 28 3	\$ 37E 712\$ \$ 41E 6770 \$ 41E 6770 \$ 41E 6770 \$ 41E 6700 \$ 37E 5150 \$ 34E 4800 \$ 35E 4500 \$ 35E 4500 \$ 34E 8200 \$ 41E 8850 \$ 34E 4775 \$ 42E 7740 \$ 42E 5740 \$ 38E 5070 \$ 35E 5070 \$ 35E 5070
176 176 178	16a 14a	Lookout Butte Louse Canyon Mortin Crock Merritt Mountel	(Nov)	2 40S 4 27 40S 4 18 44H 4 10 46H 5	7E 5650 14E 6440 10E 6700	18F70 17F20 18E19M 18F80	Bully Creek Call Meadows Cattonwood-India Crane Proirie Crow Camp	π	29 20S 10 19S 24 16S	37E 530 33E 534 39E 432 34E 537 34E 550	10 18E8 20 18E6/ 75 18E25	A (Ellertson Meadown Gold Center Goodrich Lako Inicko House Ladd Summit		18 88 38 5 21 98 36 5 4 98 38 6 5 88 38 4 5 58 39 3	340 775 930	17D1 17D2P 17D14a	Imnoho R Ameroid Lako No. 1 Ameroid Lake No. 2 Blg Sheop	16 4 16 4	S 45E 7480 S 45E 7500 S 46E 5200
C	n		ELAT.	N	1 W	A lest	S H	0	M	120' G	T	" C) N 1:0'		117*		UI	MATILLA, WALLA WALL LOWER JOHN DAY I Umotilla R	VÁ TERSHEDS IN	OCK,
D	44	₹ 7	The state of the s		Columbia PORTL	AND LTIMOMAH	COLUMBRA ZDDI Q ZDDI Q ZDDI Q ZDDI Q	PAS S	RIVER	711	atilla, Walla W Willow, Rock)	. /	18013 ° 18013 ° 1804		ITOH		19D2P 18D12MP 18D4M 18D6P 18D5 18D3M 18D13	Arbuckle Mountain Battle Mountain Sum Emigrant Springs Lucky Strike Moschum Tollgate Walla Wella Divorsio	it \$9 3 29 1 28 3 34 5 25 1 32 4 m 22 6	S 29E 5400 S 31E 4340 N 35E 3925 S 32E 5050 S 35E 4300 N 36E 5070 N 38E 2400
ı	ľ	10	THE ANOTHER	TAMHELL			2003 Hood		8		Lower John Da	18013		1706 1702 170wder	Pine, Ira		18D16 18D3M 18017	Blue Mountain Camp Toligate Woslon Mountain	32 4	H 37E 4300 N 39E 5070 N 55E 3700
E	45°		LINCOLA	23E2 23E3 25E3 25E3	Willamette N A n 22c N Sonn	1	Lower Desci	nutes	2051	1969	Upper	r John I	USE BETT CEST	PRONDE	mnaha		1902 19024 19024 19024 1902a 1902a 1902a 1902p	LEGEND SNOW COURSE ONLY SNOW COURSE SOIL MOIST SNOW COURSE SOIL MOIST SNOW COURSE SOIL MOIST SNOW COURSE AND AERIAL SOIL MOISTURE ONLY AERIAL MARKER ONLY AERIAL MARKER ONLY AERIAL MARKER ONLY AERIAL MARKER ONLY AND COURSE AND PRECIPITATION GAGE ONI RADIO TELEMETRY	URE AND AERIAL : . MARKER PITATION GAGE	МАЛЯ ЕЯ «««
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G	es.—	Con No	2304	Rogue III 2303 2303 2203 2203	2030 223 22030 223 22030 223	12 15 15 15 15 15 15 15	Land 1 2003 Committee	2003	2004 2005 2005 2001 2001	200 8 2060 2068 2061 20H3	A S H O C HA (SHE)		Basin 1807	01863 01863		16GI 16GS 66GS 66G10	15HB 16H5	6 15H3		az
1		24	23	20	SCALE IN	122**	21	120	20	izo*	19	£19	r 8	IIII	17	€ 3(16H3	915H8 915H8 118*	1150	14

MARCI	2004 10,410% 0.55		16,640.1	Ned	SOURT CHE	FLPV	N. HOLE S	AME	CLC	LOCATION	100	řířv
	Willow Creek		2186	Book Pana	24 153	197. 4755	25/112	Fourmile Lako		363	51;	
19D2P 18E1P	Arbuckle Mouniain Anthony Lake	33 43 29E 5400 18 TS 37E T125	21E4 12E1 31E3	Harton Forks Hill City Anntism Junction	25 118 29 93 14 13.	7E 2730 35 #7F TF 399F	2104P 21026 21716	Garbor Remard Prairie Hyalt Prairie Reservoir	32	393 383 593	4.6	4850 4500 4900
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	Upper John Day &			McKenzie Riv	22/25 20/6NP	Pulloan Guard Station Quarts Houston	9	31k3 303	6E	4150		
19D2P	Arbuckle Mountoin	33 43 298 5400	21E8 72E4	Bead Horse Grade Lost Creek Ranch	13 163 24 163	71. 3800 61 1456	22011	Neven Lakes Ho. 2 Ceren Rile State Line (Cal)	- 4		5£ 61.	6200 5725
18D12MP 19E2M	Bottle Hountain Summit Beech Croek Summit 32 8	29 N° 31E 4340 5-33 11S 30E 4650	21E7 22X5	Hakenale Hakenale Hallae	35 153 13 163	75(X) 481.0 51 1374	20H1# 20G9AF	Siramierry	- 4	403	16k	5750 5760
18216MP 18213H	Blue Mountain Springs Blue Mountain Summit	21 153 35E 5000 6 129 36E 5098	21K6 21K9	Vida While Branch Slide	28 163 15 163	21 ADD 71 3500	2003AP 2102	tun Hountain	22	9.23		5530
19E3MP 18E17o	Oerr Eost Fork Canyon	14 135 25E 5670 15 158 32E 5700		Middle Fork Willometi	le River		200135 2103P	Rycan Plat Taylor Buile	25 21	51.0 5521	140 110	5500 5100
18E8 16E24a	Gold Center Indian Cr. Butte		22F3	Parcada Cumatt	1.50	611 4880				,		
19E9P 1806P	lsee Sumit Lucky Strike	18 16 29E 5293 28 33 32E 3050	22F6 22F6	McCredie Springe Meridian Dam	36 218 13 193	46. 2120 1W 750	Pocific	Power and Light Comp				
20E1MP 20E2	Marka Creek Ochoco Meadows	75 128 19E 4\$40 21 13. 20E \$200	32F7 32F5	Pakridge Railread Overpase	16 210	3F 1010 3E 2750	10	Pealty (PPSL) Ply 101 Ranch (PPSL)	21	363	14E	1100
18E7o 18D7	Olive Lake Schoolmarm	14 93 34E 6000 78 49 34E 4775	22F4 21F2F	Pakridge Railread Overpane Salt Creek Palle Walde Lake Willamette Pane	32 223 15 21.	547 4900 61 5500	3	Pry 101 Ranch (PPSL) Chlicgrin (PPSL) Crystal (PPSL)	34	341	7E 6[]	4187 4200
19F1M 19E7M	Gold Center Indian Cr. Futte Isee Summit Lucky Strike Marka Creek Ochooo Meadaws Olive Lake Schoolmarm Snow Mountain Starr Fidge Tipton	1 19 26E 6300 20 153 31E 5150	\$3514*			541 51/00	\$ (4	Fort Klamath (PPSE)	33	36/1	6E	4200
18E9P 18E25MP	Tipton Williamo Ranch	34 108 3558 5100 20 157 32E 4500		Coost Fork Willomett			0	k41x (PRM.)	1	3 311	€li	4533
	UPPER DESCHUTES, CROOKED	WATERSHEDS 31	22710	Champton Golden Curry Creek	12 25	1F 4500 1F 3136						
	Upper Danchules F	Rlver	23F13 23F12	Laying Creek R. S. Lund Park Weaver Creek		1F 1200 15 1740	L	KE COUNTY, GOOSE LAKE		KSHLD	3 1771	
21511	Black Pino Spring	14 16.7 9E 4600	22F1I			11 2440	20015a	Goose Luke		1101	1.01	5000
21F8 22F3	Black Pino Spring Caldwell Ranch Csecode Summit	30 213 8E 4400 7 758 6E 4880	0.17	Mary's River		41.	20/18/09 20/18/09 20/11/A	Pear Fiel Hender In an Hinek Clarkint	5	1905 1905 1978	217	5720
21F1i 21F2OP	Chemuli Deer Creek	31 278 BE 1760 35 103 7E 4554	25%1	Mary's Post	21 1	'W 7620	20113a 20113a	fracion fint (fint Dismot losamp (Cal				
21E6 21F4	Hogg Pass Hungry Fist	74 133 79E 4755 30 188 31E 4400		Lucklamute Riv	101		20017a 200180	Patton Manline	31	3.05	181.	4800 5920
21F6* 21F17	Chemull Deer Cteek Hogg Panp Hungry Finl Itinh-Taylor Howlich New Cresconi Lake Hew Dutelman Fint #2	25 300 6E 5500 13 254 8E 4700	25E2 25E3	Laurei Hounieln Valeets Susmil		79 3600 79 4730	20111 a 3017AP	State Line ICol Strawlerry Sillow/feel	2	4101	115	3750 5760
21F10 21E16	New Creaconi Lake Hew Duichman Flat #2	11 74" 6E 4800 21 16: 91 6400					2C 316n	Sillow/Teel	1	400	211	6070
21F3 21E15	Tangent Three Creeks Sutle	78 167 108 5400 77 16 48 5200		200115 1000000 000	Maritha			Abert Lake				
21E13 22F2P	Throo Crooks Mesdows Waldo Lake Willsmotte Poss	34 16. /E \$659 15 31/ 6F \$500		ROGUE, UMPQUA WAT			20115a 20118ap	Petr Plat Heads - Polyth Greek		9 G		5400 6550
22F14°	Willswette 1,023	33 14: 51/F 5600	24/16	Rogue River		4 4150	103118 0314a	to Pint	10	377	181.	5750
	Crooked Rivor		331745f 2016	Althore Annie proj Peaver Une Creek Hig Fed Huminin Hille Creel Hylle Callann	17 417	61 6018	20/14 20:165()	Fining Cormin Hill Ureal Insta H Junial D Lumnar Valley	1	3411 1011	17F 161	5200 5120
19E3MP	Oorr	14 1V .5L 5670	23078 227211	Hig Fed Huniain	31 4	4) 5100 (N 6, 50	6 10a	horman Valley		3"		116.00
20E1MP 20E2	Harks Creek Ochogo Hendows	15 1: 10F 454n 71 12 20E 5300	22G[16 23G00	Hille Crest Hylde Callian	311 31 11: 40.	8		Summor Lake	,			
19F1H 19E4	Ochoco Meadows Unew Hountain Tomarack	1 1x 26E 6300 8 1h 25E 4800	23/127 22F19	Callian Deads of Junction Dissort-Crater usall	14 281	48. 4000 81. 5000	20(0)(1)	Charge or a Len	23	1100	161	7,2011
HOOD	, MILE CREEKS, LOWER DESCH	HUTES WATERSHEDS (6)	22/314P 22/412	Plate Lake	7 756	41. 401/3 51 61/00		Silver Lake				
	Hood Rives		. 1:13 22:126	Rayback Penl Royard Prairie	9 40	5W F 00R 47 4500 38 4500	711131 303135	itiver Crowl 3: grantilat	5 2r 21	10J	13L 14F	41t00 5500
2106P	Brocks Meadows Cooper Spur	2" 100 4300	21 316 22/122	Hyalt Prair o Merain in Little Smi Muntain	35 41 1 15 401	2W 6500		Wormer Lak				
21025M 2101	Greenpoint Reservoir	6 Z. 10l. 3490 37 2ll 9E 3200	227314 23734 3335			197 1080 797 4945	210 18502	I'mnaa Spaol		199	218	5720
21020 21023	Knebal Springa Parkdale	5 MD BAL BILL	2: 5	Hule Creek Page Mountain Park Headquarters Juven Cakes No. 3	£ 31 '	6) 6550 6) 6200	18/13 a 19/11 n	Diemi wamp (Cal	31	1 40011 1 3000	721. 251	7200 1/350
2108* 21D4	Red B111	20 18 91, 4400	72 (11 22/12	. 11ver Burn	30 3ff	41 1720	21r 11 a 20 11 a	Olemb wamp (Pal Hart M untain Theimin Valley William Presh	1:	5 890 5 40°	210	6600 6020
2109 21028	Switchback	25 38 dipl. A670 8 18 9E 3255 15 29 9E 5000	35.720 10/12 21.34	Takly or unwith the Powl V with court Fork Count	22 41.	18 6000 3508		Guana Lnk				
21D7P 21D21	Tilly Jane Ulrich Ranch Junction	10 10 11E 3350 3 33 9E 5400	2271	Whaleberk	4 91	5925	1981		1 1	7 -45II	211	1,720
21030 21024	Umbrolla Fallo Upper Valley	20 1/3 106 2530		Umpqua Rivar			15514 1314a	Hart Hountain Little Daily Mt. (New		1 - 1/s 5 - 4/s/ll	19E	1850 5600
	Mile Creaks - Mosler	Crook	22F9 2 F18F	Champ n Diamord Late	17 73'	1 10 1		HARINEY BASIN WAT	ERSH	nn G		
2106P 21D20	Brooks Meadows Knebal orrings	2 2 10 450 31 1, 11F 505	21 R 2569	Fing Educate 1 . 1 Fing Educate N . 2	4 11	497 4 50 h	10678	Silvion River - \$1		Creal		5340
21021	Wirich Ranch Junction		23G10 23G11	Eleg H entain 1 . A Eleg Me estain He. t	13 31 33 31	49 14H 49 7H49	1987	helint and Lake	71	3 1971	261.	5500
	Lower Deschulas R	Rlvor	27 112	King Hamitain 1 . F	1 7 3 31	691 7111 691 311	18635	idlewilt Parp	21	7 2 1	311	5200
21D12 21D22	Clear Lake Cluar Lake Experimental	23 47 1F 1500	22F16 22F75	forth to crue	1 1 1 1	F1 4115	11	8 t pulny pow Mountain	41	193	321	5100
21E6	Holy Pann	24 13: Nyt. 4755	20124 22125	ted Futte 1. 2	30 37	47.0 18110	1 11.7K	Mair Philips	2	0 15.	318	6160
	LOWER COLUMBIA WATE	ERSHEDS IZI	271/24	Politite War 4 Fod Polite War 5	10 176	IN 15	1974s	SHI w-Dald		2 2%		
	Sondy River		23528 22117	Trap Cleat	2 27.	3 7 70 00 41 3550 3 5025		Donner Und BII12	on R	lver		
2108° 2109	Phior Point SUIN Creek	7 3° 95 5400 25 3S 891 3670	2, 31	Whaleta I	4 375	18 NES	18F6A 18G2HFA	inok Pastare Tish Grock		4 331	32%	5700 E 9900
CAGO	WILLAMETTE WATERS			KLAMATH WATERS	SITEDS ***		1931 s 1801394	Bari Baudala Hilytes	9	1 363 5 313	25K 32N	6350 E 8900
	Clackaman Riv			Klamath Rivi		18074	77° 1.12°	1	1 15%	324	6600	
2103		35 50 H ₂ 3400 29 41 Ht 3500	75. 25a133	Aunte Opring Billie Trask Bivide	1/1 31 30 311			Traul and Whiteh				4.55
21012 21014P*			21/15/1 21F11	Biy Kauntein Chemult	5 5 22 371° 21 275	112 1010 8E 1760	1876a 1881	Dunio Creek Disanter York 18ev)	6 4716	341.	6000 6500
21D8* 21D9	Phlox Point	5 15 & TE 1510 7 3. 91 \$400 75 3. 515E 3670	20,136	Cold prints to the transport Flat	12 35.	15 6100	17Gba 16G5a	Ogwynn Cenynn Trout Canek				6950 7800
	Sontiam Rive	r	20112A 22F19	Hismord-Trater Number	34 280	In), 1/8/00		Harnay Lak	ė			
22E1		1 103 5L 1510	21F18 21:164	D : Holl-w	1 400	71; 4690 141 4700	18080	Buckerin take	2	5 250	30E	5200
22E2	Detroit Om	7 10J 5F 1580	2 (14)	Finley C rral	11. 3%	185 40Gm	V					
		Man and	Inde	to OREG	ON	SNO	w cc	OURSES				

Map and Index to OREGON SNOW COURSES



The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE

Idaho Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon State University
Oregon State Engineer and Corps of State Watermasters
Oregon State Highway Engineers
Soil and Water Conservation Districts of Oregon

COUNTY

Douglas County Water Resources Survey FEDERAL

Department of Agriculture
Cooperative Extension Service
Forest Service
Soil Conservation Service
Department of Commerce
Weather Bureau
Department of the Interior

Bonneville Power Administration
Bureau of Land Management
Bureau of Reclamation
Fish and Wildlife Service
Geological Survey
National Park Service

Department of National Defense Corps of Army Engineers

PUBLIC UTILITIES

Pacific Power and Light Company Portland General Electric Company California-Pacific Utilities Company

MUNICIPALITIES

City of Baker City of La Grande City of The Dalles City of Walla Walla

IRRIGATION DISTRICTS

Arnold Irrigation District Associated Ditch Companies Burnt River Irrigation District Central Oregon Irrigation. District East Fork Irrigation District Grants Pass Irrigation District Hood River Irrigation District Jordan Valley Irrigation District Juniper Flat Irrigation District Lakeview Water Users, Incorporated Medford Irrigation District Middle Fork Irrigation District North Board of Control - Owyhee Project North Unit Irrigation District Ochoco Irrigation District Rogue River Valley Irrigation District South Board of Control - Owyhee Project Squaw Creek Irrigation District Talent Irrigation District Tumalo Project Vale-Oregon Irrigation District

PRIVATE ORGANIZATIONS

The Crag Rats, Hood River, Oregon

Warmsprings Irrigation District

UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE 1218 S.W. WASHINGTON ST. PORTLAND, OREGON 97205

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